

Index of the IDEAS, in 'brief' form

Ideas: 20229

The number before each idea may be used at PHILOSOPHYIDEAS.COM to obtain fuller details of the idea and its source.

Suggestion: You may find a highlighter pen useful!

1. Philosophy

A. Wisdom

1. Nature of Wisdom

defining and explaining the nature of true wisdom

- 5896 Speaking the truth deifies man [Pythagoras]
7990 Wisdom is freedom and indifferent [Anon (Bhag)]
1922 Virtue is wisdom, guiding other qualities [Plato]
14179 Supreme wisdom is in social organisation [Plato]
354 Wisdom makes other virtues possible [Plato]
13786 Wisdom is beautiful, for its actions [Plato]
78 Wisdom is knowledge of precious things [Aristotle]
5248 Wisdom concerns the unchanging, not happiness [Aristotle]
19693 There is practical and theoretical wisdom [Aristotle]
548 Knowledge for its own sake is wisdom [Aristotle]
11228 Wisdom seeks causes and reasons [Aristotle]
7278 Words of wisdom are precise and clear [Chuang Tzu]
9199 An instant of wisdom equals eternity [Chrysippus]
21405 Does wisdom concern knowledge, or morality? [Cicero]
13310 Wisdom does not lie in books [Seneca]
7911 Theory vanishes when wisdom comes [Rahulabhadra]
21875 Wisdom concerns life, not death [Spinoza]
17230 Without true wisdom, live by maxims [Spinoza]
12926 Wisdom is the science of happiness [Leibniz]
19396 Wisdom knows all theory and practice [Leibniz]
19336 Wisdom aims at perfection [Leibniz]
5540 Clever people know what can be asked [Kant]
6200 Know the highest good and match the will to it [Kant]
21422 Moral self-knowledge is the basis of wisdom [Kant]
21979 Wisdom emerges at the end of a process [Hegel]
14888 Wisdom avoids rule by the moment [Nietzsche]
14857 Great wisdom appears simple [Nietzsche]
21584 A sense of timelessness is essential to wisdom [Russell]
7623 For the Greeks being wise was an ethical value [Putnam]
5333 Who are we?, as well as how should we be? [Flanagan]
19735 Knowledge, then understanding, then wisdom [Greco]
20186 Unlike knowledge, wisdom cannot be misused [Zagzebski]

2. Wise People

sort of character traits which accompany wisdom

- 6319 Wisdom chooses inaction and silence [Lao Tzu]
6325 Knowledge is silent; ignorance speaks [Lao Tzu]
421 Wisdom needs enormous breadth [Heraclitus]
13780 Good people are wise people [Plato]
2136 As philosophers study order they acquire order [Plato]
2682 Wisdom matters more than our own lives [Nagel]
103 Wisdom is solitary, though others can help [Aristotle]
545 Theory without experience is poor medicine [Aristotle]
14519 Showing reverence for wisdom is a good [Epicurus]
20801 Wise men are never tricked [Zeno of Citium]
20853 Wise men should be good influences in politics [Chrysippus]
20854 Wise men are not astonished by wonders [Stoic school]
20866 Wise men join morally progressive politics [Stoic school]
20871 We have to choose a life when too young [Cicero]
5893 Wise men have integrity, firmness, patience [Cicero]
13560 Wise men are never subservient [Seneca]
13295 Wise people escape necessity by willing it [Seneca]
3067 Have principles in readiness for understanding [Aurelius]
22115 Wise people pursue truth, and fight falsehood [Aquinas]
6259 A wise person can doubt everything [Montaigne]
7914 Wisdom on our own is impossible [Rochefoucauld]
12903 Wisdom links acts of will [Leibniz]
14863 Unlike science, true wisdom has good taste [Nietzsche]
20262 Don't use wisdom in order to become clever! [Nietzsche]
20383 The wisest man has contradictions, and harmony [Nietzsche]
7536 The only thing you can improve is yourself [Wittgenstein]
16010 Wisdom, unlike faith, is passionless [Wittgenstein]
19694 Wisdom is of persons, not of mental states [Zagzebski]

3. Wisdom Deflated

doubts about the high status of wisdom

- 291 The old are not necessarily wise [Plato]
7893 Our life is the creation of our mind [Anon (Dham)]
8766 In much wisdom is much grief [Anon (Eco)]
20815 No wise man has yet been discovered [Stoic school]
6263 Wisdom is weaker than instinct [Montaigne]
8093 Wisdom is easier to find than truth [Joubert]
14890 Suffering is the meaning of existence [Nietzsche]
18290 But why does your body want wisdom? [Nietzsche]
7170 'Wisdom' is hostile to life [Nietzsche]
19608 Wisdom is the last gasp of decadence [Cioran]
9247 Life without meaning is lived better [Camus]
9764 Wisdom is improving, unlike philosophy [Quine]
3240 Perplexity is better than some answers [Nagel]
7490 Wisdom has ceased to be attainable [Watson]
19695 The devil seems evil but wise [Whitcomb]

B. History of Ideas

1. History of Ideas

history of human ideas and their relation to cultures

- 12105 Theology, then metaphysics, then positivism [Comte]
12104 Understand ideas by their history [Comte]
19624 Intelligence flourishes at the end of an era [Cioran]
19599 Ideas are neutral; people enthuse them [Cioran]
19629 Nations express values, and then decline [Cioran]
19631 The history of ideas is meaningless [Cioran]
19645 For some thinkers, their era is irrelevant [Cioran]
7460 Key moments: 300BCE, 1520, 1790 [Berlin]
21852 Nomads are the vague basis of history [Deleuze]
7461 The soul, Europe, and the experiment [Watson]
7464 Six candidates for the one big idea [Watson]

2. Ancient Thought

landmarks in Greek thought, and other early cultures

- 1597 Thales was first to think reality intelligible [Roochnik]
3051 Pythagoras discovered number ratios in harmony [Pythagoras]
1542 Diogenes of Apollonia was last early scientist [Diogenes of Apollonia]
2922 All the best Romans were Epicureans [Nietzsche]
7500 City for early Greeks, self for later Greeks [Foucault]

3. Greek-English Lexicon

English versions of key Greek philosophical terms

- 11300 Agathon: good [PG]
11301 Aisthesis: perception [PG]
11302 Aitia: cause, explanation [PG]
11303 Akrasia: lack of control, weakness of will [PG]
11304 Aletheia: truth [PG]
11305 Anamnesis: recollection [PG]
11306 Ananke: necessity [PG]
11307 Antikeimenon: object [PG]
11375 Apatheia; unemotional [PG]
11308 Apeiron: the unlimited [PG]
11376 Aphairesis: taking away, abstraction [PG]
11309 Apodeixis: demonstration [PG]
11310 Aporia: puzzle [PG]
11311 Arche: first principle [PG]
11312 Arete: virtue, excellence [PG]
11313 Chronismos: separation [PG]
11314 Diairesis: division [PG]
11315 Dialectic: discussion [PG]
11316 Dianoia: intellection [PG]
11317 Diaphora: difference [PG]
11318 Dikaioyne: moral goodness [PG]
11319 Doxa: opinion, belief [PG]
11320 Dunamis: faculty, potentiality [PG]
11321 Eidos: form, idea [PG]
11322 Elenchos: interrogation [PG]

- 11323 Empeiron: experience [PG]
11324 Energeia: actuality, power? [PG]
11325 Enkrateia: control [PG]
11326 Entelecheia: having an end [PG]
11327 Epagoge: induction, explanation [PG]
11328 Episteme: knowledge [PG]
11329 Epithumia: appetite [PG]
11330 Ergon: function [PG]
11331 Eristic: disputation [PG]
11332 Eros: love [PG]
11333 Eudaimonia: flourishing [PG]
11334 Genos: type [PG]
11335 Hexis: habit [PG]
11336 Horismos: definition [PG]
11337 Hule: matter [PG]
11338 Hupokeimenon: underlying thing [PG]
11339 Kalos: beauty, fineness [PG]
11340 Kath' hauto: in virtue of itself [PG]
11341 Kinesis: movement, process [PG]
11342 Kosmos: order, universe [PG]
11343 Logos: reason, account [PG]
11344 Meson: the mean [PG]
11345 Metechtein: partaking [PG]
11377 Mimesis: imitation, fine art [PG]
11346 Morphe: form [PG]
11347 Noesis: intellection [PG]
11348 Nomos: convention, law [PG]
11349 Nous: intuition [PG]
11350 Orexis: desire [PG]
11351 Ousia: substance, (primary) being [PG]
11352 Pathos: emotion, affection [PG]
11353 Phantasia: imagination [PG]
11354 Philia: friendship [PG]
11355 Philosophia: love of wisdom [PG]
11356 Phronesis: prudence, practical reason [PG]
11357 Physis: nature [PG]
11358 Praxis: action [PG]
11359 Prote ousia: primary being [PG]
11360 Psuche: mind, soul, life [PG]
11361 Sophia: wisdom [PG]
11362 Sophrosune: moderation [PG]
11363 Stoiceia: elements [PG]
11364 Sullogismos: deduction, syllogism [PG]
11365 Techne: skill, practical knowledge [PG]
11366 Telos: purpose, end [PG]
11367 Theoria: contemplation [PG]
11368 Theos: god [PG]
11369 Ti esti: what-something-is, essence [PG]
11370 Timoria: vengeance, punishment [PG]
11371 To ti en enai: essence, what-it-is-to-be [PG]
11372 To ti estin: essence [PG]
11373 Tode ti: this-such, subject of predication [PG]

4. Early European Thought

landmarks of general European thought, 600 CE - 1600

- 8074 Divergence from Aristotle was fined at Oxford [Oxford Univ 1350]
8011 Aristotle is a buffoon [Luther]
18330 The Renaissance was the last great age [Nietzsche]
9291 The Renaissance ends with Hermeticism [Yates]
9288 Ficino mixed magic into neo-platonism [Yates]
8013 Morality shifted in the Reformation [MacIntyre]

5. Later European Thought

landmarks of general European thought, 1601 - 1878

- 7822 Neo-stoicism began in about 1580 [Lipsius]
7504 The new knowledge doesn't need moral purity [Descartes]
19635 Hegel gave us bogus progress [Hegel]
7662 Romanticism is the West's greatest shift [Berlin]
8021 The Levellers are a moral turning point [MacIntyre]
8060 17th/18th century saw the rise of altruism [MacIntyre]

8092 Logic was originally a branch of rhetoric [Devlin]
9307 Modern culture was born in Jena in the 1790s [Svendsen]
19648 We only believe in 'correlations' with reality [Meillassoux]
19674 Decentre the Earth, and decentre thinking! [Meillassoux]
21855 Spinoza was taboo until the 1780s [Lord]
20678 Science emerged from discovering ignorance [Harari]
20686 People were ignorant of energy conversion [Harari]

6. Twentieth Century Thought

landmarks of general European thought, 1879 - 2000

8053 Modern society re-enacts 18th cent. philosophy [MacIntyre]
19657 Things were unknowable, but now unthinkable [Meillassoux]

C. History of Philosophy

1. History of Philosophy

general ideas about the history of philosophy

19579 We are still learning how to do philosophy [Novalis]
19441 Philosophies emerge from historical moments [Feuerbach]
8000 Ignorance brings repetition in philosophy [Santayana]
18730 The history matters if we choose theories [Wittgenstein]
21844 The history of philosophy is an agent of power [Deleuze]
13860 Distort past philosophy to learn from it [Wright, C]
16604 Plato, Aristotle and Democritus are the basics [Pasnau]
16606 All thinkers draw on past thinkers [Pasnau]

2. Ancient Philosophy

general ideas about ancient philosophy up to 642 CE

a. Ancient chronology

11461 323: Euclid's 'Elements' [PG]
11390 1000: 'The Upanishads' [PG]
11391 750: Book of Genesis [PG]
11392 585: Thales predicts an eclipse [PG]
11395 570: Anaximander in Miletus [PG]
11396 563: birth of the Buddha [PG]
11398 540: Lao Tzu's 'Tao Te Ching' [PG]
11400 529: Pythagoras founds a community [PG]
11403 500: Heraclitus at Ephesus [PG]
11404 496: Confucius begins travels [PG]
11408 472: Empedocles aids democracy in Acragas [PG]
11412 450: Parmenides and Zeno in Athens [PG]
11414 443: Protagoras writes laws for Thurii [PG]
11417 436: Anaxagoras charged with impiety [PG]
11421 427: Gorgias in Athens [PG]
11425 399: Plato missed death of Socrates [PG]
11432 387: founded the Academy [PG]
11433 387: Cyrenaic school founded [PG]
11440 367: Aristotle arrives at the Academy [PG]
11443 360: Diogenes lives in a barrel in Athens [PG]
11445 347: Plato died [PG]
11454 343: Aristotle tutors Alexander [PG]
11456 335: Aristotle founds the Lyceum [PG]
11459 330: Chuang Tzu's 'Book' [PG]
11465 322: Aristotle dies in Chalcis [PG]
11468 307: Epicurus founded the Garden [PG]
11470 301: Zeno founded the Stoa [PG]
11483 261: Cleanthes head of the Stoa [PG]
11486 229: Chrysippus head of the Stoa [PG]
11492 157: Carneades head of the Academy [PG]
11509 85: philosophy moves to Alexandria [PG]
11513 78: Cicero studies with Posidonius [PG]
11516 60: Lucretius's 'On the Nature of the Cosmos' [PG]
11528 65: suicide of Seneca [PG]
11531 80: Epictetus's 'Discourses' [PG]
11535 170: Marcus Aurelius's 'Meditations' [PG]
11537 200: Sextus's 'Outlines of Pyrrhonism' [PG]
11541 263: Porphyry studies with Plotinus [PG]
11545 310: Roman Empire becomes Christian [PG]
11549 387: Augustine converts to Christianity [PG]
11555 523: Boethius's 'Consolations of Philosophy' [PG]
11557 529: Justinian closes philosophy in Athens [PG]

b. Pre-Socratic philosophy

5988 Anaximander wrote the first philosophy book [Anaximander]
3060 Plato wished to burn the works of Democritus [Plato]
2900 I revere Heraclitus [Nietzsche]
12036 Xenophanes founded epistemology [Annas]
20455 Philosophy began as the rival of tragedy [Critchley]
21355 Pre-Socratics often include religion [Leroi]

c. Classical philosophy

13773 Prodicus sells truth by the drachma [Socrates]
21336 Crates treated his life as a joke [Crates of Thebes]
2913 Thucydides is the perfect anti-Plato sophist [Nietzsche]
7719 Philosophy is just footnotes to Plato [Whitehead]
12046 Plato the first systematic philosopher [Annas]

3. Earlier European Philosophy

general ideas about philosophy in Europe 643 CE - 1600

a. Earlier European chronology

11558 622: Mohammed's 'The Koran' [PG]
11559 642: Arabs close philosophy in Alexandria [PG]
11560 910: Al-Farabi writing [PG]
11562 1015: Avicenna's 'The Healing' [PG]
11564 1090: Anselm's 'Prologion' [PG]
11566 1115: Abelard teaches logic in Paris [PG]
11573 1166: Averroes's Aristotelian commentaries [PG]
11581 1266: Aquinas begins 'Summa Theologica' [PG]
11586 1280: Aquinas becomes Dominicans' theology [PG]
11591 1328: William moves to Munich [PG]
17916 1347: the Church persecutes philosophers [PG]
11593 1470: Ficino founds a Florentine Academy [PG]
11596 1513: Machiavelli's 'The Prince' [PG]
11599 1543: Copernicus's 'Revolution of Spheres' [PG]
11601 1580: Montaigne's 'Essays' vol. 1 [PG]
11607 1600: Bruno executed for heresy [PG]

b. Early medieval philosophy

16137 'Categories' once dominated Aristotle studies [Frede, M]
16586 Averroes was the main guide to Aristotle [Pasnau]
16568 Modernity began in late 12th century [Pasnau]

c. Later medieval philosophy

7823 Lucretius was rediscovered in 1417 [Grayling]
16653 Real accidents makes 'Categories' crucial [Pasnau]
16704 In 1347 the Church stopped philosophy [Pasnau]

d. Renaissance philosophy

16605 Plato was largely unknown before 1450 [Pasnau]
16607 Renaissance Platonism is peripheral [Pasnau]
16715 Plato's impact was local to Italy [Pasnau]

4. Later European Philosophy

general ideas about philosophy from 1601 to 1878

a. Later European chronology

11613 1619: Descartes's revelations at Ulm [PG]
11614 1620 'Novum Organum' by Bacon [PG]
11619 1633: condemnation of Galileo [PG]
11623 1641: Descartes's 'Meditations' [PG]
11626 1650: Descartes dies in Sweden [PG]
11627 1651: Hobbes's 'Leviathan' [PG]
11633 1662 'Port-Royal Logic' [PG]
11634 1665: Spinoza finishes 'Ethics' [PG]
11643 1676: Leibniz settles in Brunswick [PG]
11649 1687: Newton's 'Principia' [PG]
11652 1690: Locke 'Essay' [PG]
11654 1697: Bayle's 'Dictionary' [PG]
11659 1713: Berkeley's 'Three Dialogues' [PG]
11666 1734: Voltaire's 'Philosophical Letters' [PG]
11667 1739: Hume's 'Treatise' [PG]
11675 1762: Rousseau's 'Social Contract' [PG]
11682 1781: Kant's 'Critique of Pure Reason' [PG]
11683 1785: Reid's 'Essays' [PG]
11687 1789: French Revolution begins [PG]
11694 1807: Hegel's 'Phenomenology of Spirit' [PG]
11701 1818: Schopenhauer's 'World as Will and Idea' [PG]
11710 1840: Kierkegaard lives quietly in Copenhagen [PG]
11713 1843: Mill 'System of Logic' [PG]
11715 1848: Marx/Engels 'Communist Manifesto' [PG]
11717 1859: Darwin 'Origin of the Species' [PG]
11721 1861: Mill's 'Utilitarianism' [PG]
11724 1867: Marx 'Capital vol. 1' [PG]

b. Seventeenth century philosophy

7396 Hobbes created English-language philosophy [Hobbes]
19359 Leibniz offers rational support for empiricism [Leibniz]
7454 Gassendi founded empiricism [Hacking]
2945 Descartes put knowledge before reality [Lehrer]
16610 Descartes saved philosophy in 17th C [Pasnau]
16781 The 17th century is a metaphysical train wreck [Pasnau]

c. Eighteenth century philosophy

21955 Hume woke me up [Kant]
22070 Irony is consciousness of abundant chaos [Schlegel, F]
15045 Big question: What is Reason? [Foucault]
13466 All philosophy is still 'post-Kantian' [Hart, WD]
21463 Hamann, Herder, Jacobi reject Enlightenment [Gardner]
21459 Kant killed rationalism and rattled empiricism [Gardner]
9777 Kant was the first philosopher [Zizek]
22002 German 18th C thought was Wolffian [Pinkard]
22021 Romantics focused on self and nature [Pinkard]
22010 Kant plus 1789 was loved in Germany [Pinkard]

d. Nineteenth century philosophy

8215 Hegel was the last philosopher of the Book [Hegel]
20109 Hegel added society to world views [Hegel]
20255 19th C Germans were obsessed with concepts [Nietzsche]
20260 Carlyle tried to make reason romantic [Nietzsche]
22036 In 1810 naturalism was 'Spinozism' [Pinkard]
20110 Ego, nature or spirit are thing-in-itself? [Safranski]
21943 Self-criticism is now part of philosophy [Gutting]

5. Modern Philosophy

general ideas about philosophy since 1879

a. Modern philosophy chronology

17907 1879: Frege 'Concept Script' [PG]
11733 1879: Peirce taught at Johns Hopkins [PG]
17909 1892: Frege 'Sense and Reference' [PG]
17908 1884: Frege 'Grundlagen' (Foundations) [PG]
11735 1885: Nietzsche 'Thus Spake Zarathustra' [PG]
17911 1888: Dedekind axiomatises arithmetic [PG]
11740 1890: James's 'Principles of Psychology' [PG]
11742 1895: Freud develops his theories [PG]
11745 1900: Husserl's 'Logical Investigations' [PG]
11746 1903: Moore's 'Principia Ethica' [PG]
11747 1904: Dewey at Columbia [PG]
17910 1908: Zermelo axiomatises set theory [PG]
11752 1910: Russell's 'Principia Mathematica' [PG]
11756 1912: Russell meets Wittgenstein [PG]
11762 1921: Wittgenstein's 'Tractatus' [PG]
11765 1927: Heidegger's 'Being and Time' [PG]
11768 1930: death of Ramsey at 27 [PG]
11770 1931: Gödel's 'Incompleteness' [PG]
11773 1933: Tarski's theory of truth [PG]
11783 1942: Camus 'Myth of Sisyphus' [PG]
11784 1943: Sartre 'Being and Nothingness' [PG]
11787 1945: Merleau-Ponty 'Phenomenology' [PG]
17918 1947: Carnap's 'Meaning and Necessity' [PG]
11794 1950: Quine 'Two Dogmas of Empiricism' [PG]
17917 1953: Wittgenstein's 'Investigations' [PG]
17919 1956: Place's mind-brain identity theory [PG]
11804 1962: Kuhn 'Structure of Sci Revolutions' [PG]
17921 1967: Putnam suggests mental functionalism [PG]
11808 1971: Rawls 'Theory of Justice' [PG]
11810 1972: Kripke 'Naming and Necessity' [PG]
17920 1975: Putnam devised the Twin Earth example [PG]
11813 1975: Singer 'Animal Rights' [PG]
11820 1986: Lewis 'On the Plurality of Worlds' [PG]

b. Modern philosophy beginnings

11006 Russell's descriptions began a whole movement [Read]
6405 Moore rejected idealism in 1898 [Moore, GE]

c. Modern philosophy mid-period

12330 Ontology was logic, then language [Badiou]
13966 Analytic philosophy had a 'golden age' [Soames]

d. Contemporary philosophy

4697 A Social Turn has followed the Linguistic Turn [O'Grady]

D. Nature of Philosophy

1. Philosophy

general remarks about philosophy

162 Study minds in general to know individuals [Plato]
326 Science is a nice relaxation from philosophy [Plato]
549 Philosophy begins with the sense of wonder [Aristotle]
1798 Suspend judgement on all points [Pyrrho]
1771 A good argument is worth a lot of money [Zeno of Citium]
3600 Slow accurate thought is best [Descartes]
17016 Philosophy must abstract from the senses [Newton]
8095 Think with the entire body and soul [Joubert]

19583 Philosophy begins by studying philosophy [Novalis]
8927 Philosophy deals with the universal [Hegel]
21916 Free philosophers can't be religious [Schopenhauer]
7848 Philosophy begins in horror [Nietzsche]
7846 Philosophy deepens without improving [Nietzsche]
7834 Great philosophies are moral and confessional [Nietzsche]
4520 Philosophers should be rare plants [Nietzsche]
2909 Learning thinking is like learning dancing [Nietzsche]
4424 Challenge problems to single combat! [Nietzsche]
5361 Expect absurdities in philosophy [Russell]
2937 If speech is impossible, be silent [Wittgenstein]
2626 Philosophers are outside communities of ideas [Wittgenstein]
20435 Summarised philosophy is pointless [Adorno]
21849 Thoughts should be thrown like stones [Deleuze]
21887 Focus on philosophers, not on science [Derrida]
3269 Meaningfulness recedes from us [Nagel]
3242 Philosophy is the childhood of the intellect [Nagel]
7973 There is nothing that cannot be discussed [Baudrillard]
9786 Philosophers can't work in teams [Cartwright,R]
3695 Philosophy is a priori if it is anything [Bonjour]
8220 Philosophy is one long digression [Deleuze/Guattari]
1606 Every philosopher is a Platonist [Roochnik]

2. Invocation to Philosophy

encouragements to pursue philosophy
7493 Let us reason together, saith the Lord [Isaiah]
1491 Everyone has the potential for wisdom [Heraclitus]
343 The unexamined life is not worth living [Socrates]
160 Knowledge of unity and plurality is supreme [Plato]
1642 Thought involves commitment to mental life [Plato]
315 Philosophy is the supreme gift of the gods [Plato]
1765 Life without philosophy is pointless [Diogenes of Sin.]
1695 Hard thought is profitable even if it fails [Aristotle]
1576 By sharing our logos we reach truth [Aristotle]
14052 Philosophy is health, for young and old [Epicurus]
14518 Pleasure and knowledge combine in philosophy [Epicurus]
13291 Slavery to philosophy brings freedom [Epicurus]
7910 Pursue truth with extreme urgency [Ashvaghosha]
3656 True philosophers are a state's finest good [Descartes]
2118 Only correct reasoning is always beneficial [Leibniz]
19395 Philosophy derives from God [Leibniz]
16000 Tackle fixed ideas with aggression [Kierkegaard]
19250 Record and organise what is interesting [Peirce]
14861 Philosophy makes a noble art of knowledge [Nietzsche]

3. Philosophy Defined

attempts to define the whole subject of philosophy
7421 Philosophers care about others' cares [Socrates]
572 Philosophy has distinctive reasoning and life [Aristotle]
609 Philosophy is the science of principles [Aristotle]
624 Thought about thought is supreme [Aristotle]
2666 Truth and appetite are the keys to philosophy [Carneades]
21394 Philosophy seeks coherent logos [Epictetus]
6207 Ponder the starry heavens and the moral law [Kant]
21757 Philosophy shows the shape of history [Hegel]
4171 Philosophy considers only the universal [Schopenhauer]
4186 Philosophers articulate what we all know [Schopenhauer]
19456 Philosophy has no presuppositions [Feuerbach]
5278 Philosophy is just abstractions from history [Marx/Engels]
5368 Philosophy checks consistency of beliefs [Russell]
6118 Pursue logical analysis, then synthesis [Russell]
7085 What can and can't be thought? [Wittgenstein]
6870 Philosophy expresses what seemed silence [Ansell Pearson]
2512 Philosophy fights bewitchment by language [Wittgenstein]
5196 Philosophy is a department of logic [Ayer]
6707 Suicide is the only philosophical problem [Camus]
7426 Critical philosophy questions domination [Foucault]
21888 Philosophy is a linguistic display [Derrida]
2510 Philosophy was a priori enquiries into reality [Katz]
2516 Philosophy begins where science ends [Katz]
8217 Philosophy is a concept-creating discipline [Deleuze/Guattari]
12644 Is pre-1950 thought 'philosophy'? [Fodor]
9218 Philosophy studies necessary truths [Sider]
9778 There is no dialogue in philosophy [Zizek]
15357 Philosophy is the most general subject [Horsten]

4. Divisions of Philosophy

systematic divisions of philosophy into main topics
22171 Nturalism makes science first philosophy [Aristotle]
20770 Three parts, nature, character, and logos [Zeno of Citium]
20771 Divide philosophy into six parts (not three) [Cleaantes]
20772 First logic, second ethics, third physics [Chrysippus]
20806 Physics is cosmos, elements, causes [Stoic school]
20839 Stoic ethics has nine divisions [Stoic school]

5. Aims of Philosophy

what is the ultimate target of philosophy?
a. Philosophy as worldly
21360 The unobservant dogmatise too quickly [Aristotle]
2845 Always asking the use of things is pathetic [Aristotle]
1767 Philosophers see all people in the same light [Crates of Thebes]
20867 Philosophising is living by the ideas [Stoic school]
13293 Philosophy offers us guidance [Seneca]
13317 Philosophy aims at happiness [Seneca]
20876 Philosophy seeks to settle disagreements [Epictetus]
22101 Philosophy seeks the truth about things [Aquinas]
22026 Philosophy is the urge to be at home [Novalis]
21970 Success is a system which matches experience [Fichte]
19442 Philosophy aims at understanding [Feuerbach]
5300 Philosophers interpret, but the aim is change [Marx]
19228 Philosophy also studies potential being [Peirce]
14885 First the philosopher's life, then the works [Nietzsche]
14887 Only develop a philosophy you can live by [Nietzsche]
2930 Philosophers must determine the rank of values [Nietzsche]
18005 Philosophy is category-discipline [Ryle]
21845 Philosophy wants to be the official language [Deleuze]
2352 Philosophy distinguishes fact from convention [Putnam]
20962 Make philosophy more democratic [Habermas]
19066 Philosophy aims to understand the world [Dummett]
16281 Philosophy must match our commonsense [Lewis]
3798 Overexamined lives are bad too [Dennett]
8242 Philosophy doesn't seek knowledge or truth [Deleuze/Guattari]
9327 Self-understanding illuminates the world [Gulick]
18559 Philosophy must always answer to the facts [Machery]

b. Philosophy as transcendent

370 Soul is purified of the body by philosophy [Plato]
14523 Philosophy should be above a culture [Epicurus]
18450 Philosophy can separate soul from body [Porphyry]
21776 Philosophy reveals the necessity of categories [Hegel]
19073 We see separation, but seek unity [Hegel]
6928 Philosophy and religion share objectives [Feuerbach]
15585 Philosophy is like poetry, not like science [Heidegger]
15586 Intelligibility is philosophical suicide [Heidegger]
3241 We should try to escape our own minds [Nagel]
1595 Philosophy aims at beauty and highest desire [Roochnik]
9779 Philosophy is transcendental questioning [Zizek]

c. Philosophy as generalisation

11242 Wisdom is of principles and causes [Aristotle]
19588 Philosophy aims at one huge unity [Novalis]
19598 Philosophy rests on our whole learning system [Novalis]
17992 Philosophy aims to describe the Universe [Moore,GE]
21829 How do things broadly hang together? [Sellars]
3879 Philosophy aims to explain everything [Scruton]
14255 We understand things via dependencies [Fine,K]

d. Philosophy as puzzles

17949 Inquiry is the cause of philosophy [Aristotle]
12038 All humans desire to understand [Aristotle]
19586 Philosophers live on problems, like food [Novalis]
7578 My task is to create difficulties [Kierkegaard]
9254 In philosophy, the false leads to truth [Prichard]
15582 Is philosophy to abolish sham problems? [Heidegger]
18704 We aim to banish intellectual puzzles [Wittgenstein]
21239 Philosophers love evidence and ambiguity [Merleau-Ponty]
13477 The problems are philosophy's achievement [Hart,WD]
20446 Philosophy begins in disappointment [Critchley]
7950 How is actual possible if it looks impossible? [Macdonald,C]

e. Philosophy as reason

15447 Don't always follow the argument! [Lewis]
5891 Philosophy is collecting rational arguments [Cicero]
17240 Definitions are the first step in philosophy [Hobbes]
5631 Reasoning concerns knowledge, action and hopes [Kant]
6184 The main aim of philosophy is consistency [Kant]

21406 There is only one true a priori philosophy [Kant]
21753 Rational enquiry finds rationality [Hegel]
19241 All ideas are continuous, not isolated [Peirce]
17641 Maths challenges and grounds philosophy [Russell]
5189 Philosophy is critical, not speculative [Ayer]
21896 Philosophy aims at foundations for thought [Derrida]
15209 Basic errors make big disasters [Harré/Madden]
9808 Philosophy reveals the grandeur of maths [Badiou]
6851 Not 'Is it valid?' but 'Is it interesting?' [Monk]
9593 Progress in philosophy is slow, not dramatic [Williamson]
6855 Interesting philosophers don't offer validity [Martin,M]

f. Philosophy as healing

22240 Philosophy cures us of affections [Epicurus]
14889 Philosophy must aim at new ways of life [Nietzsche]

6. Hopes for Philosophy

optimistic views of what philosophy can achieve
1649 Socrates wanted a philosophic life for all [Vlastos]
1749 Philosophers are controlled without laws [Aristippus elder]
559 Even bad philosophy has value [Aristotle]
15624 Free thinking has no presuppositions [Hegel]
19227 Philosophy is a search for real truth [Peirce]
14862 The value of philosophy is its beauty [Nietzsche]
8226 A well-posed problem is a problem solved [Bergson]
2944 All expressible questions can be answered [Wittgenstein]
9763 Understand by sharpening flabby words [Quine]
9198 Our lives can still be a pursuit of wisdom [Hadot]
9408 Metaphysics, not science, says what exists [Mumford]

7. Despair over Philosophy

view of the whole enterprise as hopeless
6321 The vulgar are alert, but I am muddled [Lao Tzu]
5863 Reason is eternal, but men are foolish [Heraclitus]
9283 Ancient beliefs resists all arguments [Euripides]
125 Philosophers are feeble because apolitical [Plato]
2056 Philosophy follows the attractive ideas [Plato]
112 People submit to force more than to reason [Aristotle]
7281 Don't even start, let's just stay put [Chuang Tzu]
8138 Philosophy is dangerous [Paul]
6814 Sinners dispute and want a private scripture [Mohammed]
8658 Philosophers can't endure toothache [Shakespeare]
6602 Philosophy is a worshipped unmoving statue [Bacon]
3601 Most of human life is vain and useless [Descartes]
3602 Every absurdity has been said by a philosopher [Descartes]
2196 Philosophy reveals human blindness [Hume]
5635 Philosophy is limited in ordinary life [Kant]
22087 Philosophy doesn't articulate becoming [Kierkegaard]
14876 Philosophy can't support a popular culture [Nietzsche]
14878 It would better if there was no thought [Nietzsche]
14881 Why do people want philosophers? [Nietzsche]
14854 Deep thinkers know they are always wrong [Nietzsche]
20256 Thought is dictated by its expression [Nietzsche]
20107 Big questions, and mediocre thinkers! [Nietzsche]
7167 Words can mark the beginning of ignorance [Nietzsche]
7196 Pessimism is laughable [Nietzsche]
7137 There is too much knowledge now for philosophy [Nietzsche]
21572 Philosophers don't understand each other [Russell]
9810 'Tractatus' is great anti-philosophy [Badiou]
18710 Philosophy just expresses vague puzzles [Wittgenstein]
4148 Philosophy tries to release flies from bottles [Wittgenstein]
19618 Philosophy neglects human weakness [Cioran]
19621 Originality in philosophy is inventing terms [Cioran]
19607 Mind is superficial; it just arranges events [Cioran]
9245 There is only reason, and it is useless [Camus]
15970 Generalising is just easier, not deep [Feynman]
21893 Philosophy is metaphorical and aesthetic [Derrida]
19090 If we can't check it, philosophy is internal [Rorty]
8047 The failure of philosophy has marginalised it [MacIntyre]
12772 Philosophy is driven by values [Fraassen]
2956 Some philosophers will deny anything [Lockwood]
9208 New concepts for philosophers are new toys [Fine,K]
18494 Technical terms fix our presuppositions [Heil]
16227 Philosophers are good at denying the obvious [Hawley]
9271 Human knowledge may not produce well-being [Gray]
6575 Philosophy may undermine our daily lives [Fogelin]

8. Humour

explaining the nature and sources of what is funny

7494 Laughter is mad and useless [Anon (Ecc)]

8767 Sorrow is better than laughter [Anon (Ecc)]

6211 Laughter is sudden glory about infirmity [Hobbes]

12171 Humour is incongruity [Schopenhauer]

22047 Painless contradiction is always comic [Kierkegaard]

14833 Comedy is a transition from fear to exuberance [Nietzsche]

18303 Reject wisdom that lacks laughter [Nietzsche]

12318 The female body is the Phallus [Badiou]

12169 Laughter is an attribute of reason [Scruton]

12170 Superiority, or relief, or incongruity? [Scruton]

12172 Funny things needn't be real [Scruton]

12173 Most humour concerns the human [Scruton]

6847 Humour describes and changes our lives [Critchley]

6848 Humour is practical philosophy [Critchley]

E. Nature of Metaphysics

1. Nature of Metaphysics

nature of the most abstract philosophy

11193 Being and essence begin understanding [Avicenna]

12124 Metaphysics is best, because simplest [Bacon]

9438 Maybe metaphysics seeks real essences [Locke]

13086 Metaphysics studies intelligible being [Leibniz]

16931 Metaphysics is a priori, then synthetic [Kant]

21954 Metaphysics is everything knowable a priori [Kant]

16011 Hegel storms heaven in tiny steps [Kierkegaard]

15631 Reason aims to unite identity and being [Hegel]

19218 Logic is essential to metaphysics [Peirce]

19638 Metaphysics grows from physical anguish [Cioran]

13736 Quinean ontology is an unstructured list [Schaffer,J]

7920 Metaphysics is descriptive or revisionary [Strawson,P]

14611 Metaphysics should be timeless [Smart]

12667 Skip tests - get simplest explanation [Ellis]

16440 Aim for cost-benefit reflective equilibrium? [Stalnaker]

21959 Metaphysics makes sense of things [Moore,AW]

11912 Metaphysics defines real properties [Molnar]

3358 Metaphysics has four major topics [Benardete,JA]

14250 Metaphysics:the existence and nature of things [Fine,K]

10468 Metaphysics has ontology and ideology [Oliver]

16414 Metaphysics removes assumptions from science [Lowe]

9414 Metaphysics is the mapping of possibilities [Lowe]

19275 Studying ontology involves modality [Hale]

21634 Metaphysics is ontology plus account [Hofweber]

13734 What exists, or what grounds what? [Schaffer,J]

18859 Metaphysics is a quest for truthmakers [Tallant]

17266 Can modal logic handle all metaphysics? [Correia/Schnieder]

2. Possibility of Metaphysics

possibility of abstract wisdom through pure thought

7918 Kant makes metaphysics epistemological [Kant]

21438 Start metaphysics with cognition, not objects [Kant]

16611 Metaphysical speculation is unstoppable [Kant]

5586 Reason is confined to the limits of experience [Kant]

8107 Love of certainty restrains metaphysics [Joubert]

15612 Older metaphysics was naive [Hegel]

7080 Metaphysics divided the world into two [Nietzsche]

20728 Metaphysics without realism is hopeless [Colvin]

5432 Metaphysics cannot discover huge truths [Russell]

13939 The reality of numbers is a pseudo-question [Carnap]

16395 Kripke kept semantics and metaphysica apart [Kripke]

12771 Is good metaphysics actually true? [Fraassen]

12027 Only accept knowable metaphysics [Forbes,G]

15053 Sense is irrelevant if no solution is possible [Fine,K]

18506 Explanation and metaphysics are quite separate [Heil]

14721 Tentative metaphysics can survive [Sider]

15010 Ontology must support all your beliefs [Sider]

14912 Rivals are the only test for metaphysics [Ladyman/Ross]

3. Metaphysical Systems

building a full interconnected overview of metaphysics

21462 Kant is still acceptable as a whole [Kant]

5600 Reason is a natural system builder [Kant]

21457 Moral and natural reason are united [Kant]

19587 We want an a priori absolute artistic system [Novalis]

22069 Philosophy is progressions, not systems [Schlegel,F]

5433 Things always contain external references [Hegel]

6947 Metaphysics rests on preference, not facts [Peirce]

21489 Superordinate is general, subordinate concrete [Peirce]

2892 System building lacks integrity [Nietzsche]

21571 We need more science, fewer systems [Russell]

21574 Hegel's big system rests on a simple error [Russell]

21587 Philosophers may force truth into a system [Russell]

19620 Philosophies are just brilliant tautologies [Cioran]

22140 The greatest philosophers are methodical [Grice]

1627 With effort, any statement can be held true [Quine]

8558 Property, power, event, similar, substance [Shoemaker]

2319 Metaphysics clarifies conceptual schemes [Kim]

21461 My papers presuppose my other views [Lewis]

2797 Coherence leads to all truths being necessary [Dancy,J]

18535 Systematic thinking needs abstraction [Heil]

13917 Show categories, and their interdependency [Lowe]

21460 After Kant, only Hegel has a unified system [Gardner]

20349 Aim for essences, and a system containing them [Richardson]

20351 Metaphysics needs systems, to beat analysis [Richardson]

20350 To get the ontology, generalise the data [Richardson]

15390 Metaphysics is an account of everything [Simons]

13751 Metaphysics is essential to philosophy [Schaffer,J]

4. Metaphysics as Science

metaphysics as physical science at the highest level

12123 Nature, then physics, then metaphysics [Bacon]

21962 Metaphysics is the roots of science [Descartes]

7653 Philosophers are merely under-labourers [Locke]

16710 Leibniz aimed for a scholastic science [Leibniz]

21366 Metaphysics must really know the world [Schopenhauer]

14799 Metaphysics rests on the commonplace [Peirce]

21582 Physicists pretend they aren't metaphysical [Russell]

6095 Metaphysics describes the world [Russell]

22153 Science and philosophy are not distinct [Quine]

6891 First-order logic and set theory are enough [Quine]

15477 Ontology is highly abstract physics [Martin,CB]

13567 Ontology should illuminate science [Ellis]

15670 Philosophy exists to interpret science [Habermas]

4194 Metaphysics tackles the whole of reality [Lowe]

14977 Metaphysics concerns the structure of reality [Sider]

14994 Metaphysics doubts threaten unobservables too [Sider]

16241 Metaphysics should focus on physics [Maudlin]

14904 Metaphysics is consilience across science [Ladyman/Ross]

14907 Metaphysics progress is tied to science [Ladyman/Ross]

14908 Metaphysics must add to scientific explanation [Ladyman/Ross]

14910 Extremely general science is metaphysics [Ladyman/Ross]

14940 Modern physics offers little for metaphysics [Ladyman/Ross]

14945 Metaphysics exists to unite the sciences [Ladyman/Ross]

22138 Science rests on scholastic metaphysics [Boulter]

5. Metaphysics beyond Science

metaphysics as transcending natural science

12119 Metaphysics concerns necessities [Bacon]

12120 Physics and metaphysics, two causes each [Bacon]

12914 Two principles enable strict metaphysics [Leibniz]

12780 God's wisdom is knowable a priori [Leibniz]

9752 Reason cannot solve metaphysics [Kant]

6584 Metaphysics likes basic unchanging things [Kant]

9349 Doves dream of flying in outer space [Kant]

3722 Metaphysics goes beyond empirical examples [Kant]

6203 Metaphysic is a priori universals of physics [Kant]

21474 Metaphysics studies ultimate explanations [Schopenhauer]

19229 Metaphysics: laws and types of being [Peirce]

5182 Bad metaphysics is totally unverifiable [Ayer]

19199 Metaphysics is empirical but generalised [Tarski]

18390 Truthmakers should guide all metaphysics [Armstrong]

2546 Philosophy explores our theoretical limitation [McGinn]

17275 Metaphysics is of reality, or of natures [Fine,K]

8282 Metaphysics decides what survives change [Lowe]

16127 Metaphysics shows what there could be [Lowe]

16415 Is metaphysics the supreme science? [Hofweber]

6. Metaphysics as Conceptual

metaphysics as study of our conceptual schemes

21408 Every subject's concepts needs a metaphysics [Kant]

21761 Being leads us to being-plus-nothing [Hegel]

21764 Thinking of being generates many new concepts [Hegel]

21769 Thought must start without presuppositions [Hegel]

21768 Logic is metaphysics - grasped thoughts [Hegel]

22077 Metaphysics is the lattice of intelligibility [Hegel]

12112 Metaphysics is just abstracted phenomena [Comte]

19219 Metaphysics: easy reasoning, hard concepts [Peirce]

13876 Syntax before ontology [Frege]

20352 Nietzsche's ontology is perspectives [Nietzsche]

11103 We can slowly change our conceptual scheme [Quine]

6310 We must hang on to our conceptual scheme [Quine]

15801 To study metaphysics, study ourselves [Chisholm]

7922 Study unchanging core concepts [Strawson,P]

6979 Metaphysics involves sentence entailments [Jackson]

15215 Philosophy designs worldview concepts [Harré/Madden]

4214 Basic concepts of thought may defy analysis [Lowe]

13919 Aim at essences, not conceptual analysis [Lowe]

15003 Human language won't reveal the universe [Sider]

15169 Metaphysics clarifies and improves thought [Sidelle]

9217 Study discourse commitments or presuppositions [Loux/Zimmer]

16257 Metaphysics as conceptual is still a priori [Maudlin]

14898 Metaphysics is now aesthetic, not truthful [Ladyman/Ross]

18835 Logic and metaphysics cannot inter-ground [Rumfitt]

7. Against Metaphysics

rejections of metaphysics as a worthwhile activity

12767 Kant exposed the illusions of reason [Kant]

3301 Did metaphysics end with Hegel? [Benardete,JA]

14767 Metaphysics is moonshine [Peirce]

14860 Kant undermined our belief in metaphysics [Nietzsche]

6864 Metaphysics is reasons for instinctive beliefs [Bradley]

13737 Metaphysics is meaningless [Schlick]

16252 Metaphysics is just vacuous [Camap]

7919 Humeans even reject Kantian metaphysics [Ayer]

12325 Philosophy must give up ontology [Badiou]

15054 Metaphysical answers are unattainable? [Fine,K]

17713 After 1903 Husserl avoids metaphysics [Mares]

16276 Metaphysical possibilities may be fantasies [Maudlin]

16413 If science proves properties, why metaphysics? [Hofweber]

21666 'Fundamentality' is superficial or obscure [Hofweber]

F. Analytic Philosophy

1. Nature of Analysis

strategy and value of breaking down ideas and reality

5842 Philosophy is division into categories [Socrates]

5021 Analysis aims at a priori possibility [Leibniz]

12997 Analysis is finding middle terms [Leibniz]

14122 Analysis can never give the whole truth [Russell]

6420 All progress requires analysis [Russell]

6432 Analysis gives additional knowledge [Russell]

7527 Analyse the world, not language [Moore,GE]

19193 Disputes in vague language are meaningless [Tarski]

13750 Analysis aims to approach the facts [Urmson]

8460 Philosopher make many concepts precise [Quine/Ullian]

12773 The tools of analysis are wonderful [Fraassen]

16288 Analysis: make explicit, and reduce primitives [Lewis]

15545 Analysis for truthmakers, not definitions? [Lewis]

12865 Formal analysis avoids linguistic mess [Simons]

2. Analysis by Division

dividing a concept into component parts

648 Socrates sought universals, but not separately [Socrates]

2083 We either know basics, or can't explain wholes [Plato]

2086 Elements are more important than complexes [Plato]

166 Truth requires definition, and full analysis [Plato]

16123 In a group, look for the differences [Plato]

12274 Analyse everything to the limit [Aristotle]

1484 Don't judge a whole by its parts [Epicurus]

1887 Split a whole into many parts is impossible [Sext.Empricus]

8014 Break down, then reconstruct [Hobbes]

13099 Complete analysis of concepts is beyond us [Leibniz]

3. Analysis of Preconditions

giving necessary and sufficient conditions for a truth or event

21675 Causes are indispensable or necessitating [Stoic school]

13309 Necessary conditions needn't be causes [Seneca]

12633 Definitions often necessary, not sufficient [Fodor]

2963 Seeing causes is not a passive mental act [Lockwood]

3891 If p then q, then p suff for q, q nec for p [Scruton]

4739 'If is sufficient, 'only if' is necessary [Engel]

14600 Analysis: necessary and sufficient conditions [Schaffer,J]

20388 Necessary is needed, sufficient guarantees [Davies,S]

4. Conceptual Analysis

analysis concentrating on contents and source of concepts

2187 Meaningless ideas lack basis in experience [Hume]
9350 Reason mostly analyses our concepts [Kant]
18259 Analysis: making concepts self-conscious [Kant]
5530 Analysis is a mere preparation for metaphysics [Kant]
8415 Always distinguish concept from object [Frege]
7132 Philosophers must create concepts, not clarify [Nietzsche]
10838 The aim of a concept, not just its usage [Dummett]
8559 Analyse relationships, don't see reduction [Shoemaker]
17034 Analyses in different terms tend to fail [Kripke]
6980 Conceptual analysis seeks consistent stories [Jackson]
6983 Intuitive possibility is basic to analysis [Jackson]
14707 Only analysis makes reductions respect meaning [Jackson]
15212 Knowledge is the basis of conceptual analysis [Harré/Madden]
2946 Analysis must always have a purpose [Lehrer]
11832 Use clarifies, as well as reduction [Wiggins]
8605 Analyse, or deny, or accept as primitive [Lewis]
2474 Justification doesn't need analyses [Fodor]
13395 Analysis is revelation, not reduction [Jubien]
11159 Give the workings of concepts, not analysis [Fine,K]
9184 Can all concepts be analysed? [Williamson]
14986 Trust the particular, not the general [Sider]
14899 Analysis reveals thought, not reality! [Ladyman/Ross]
17729 Our concepts reveal their sensual input [Jenkins]
19259 2-D conceivability supports truth by analysis [Vaidya]

5. Linguistic Analysis

analysis focusing on formal or ordinary language

14027 Enquiry needs certainty about word-meaning [Epicurus]
13313 Philosophy is stuck in linguistic analysis! [Seneca]
17200 Keep words and ideas separate [Spinoza]
20947 Language shows the map of our knowledge [Herder]
6918 Focus on determined natures, not names [Feuerbach]
16012 Language makes unbiased philosophy impossible [Kierkegaard]
9841 Frege answered problems linguistically [Frege]
9840 Frege initiated linguistic philosophy [Frege]
20121 Grammar only reveals popular metaphysics [Nietzsche]
7529 All philosophy should begin with analysis [Russell]
14109 Grammar is philosophically interesting [Russell]
14456 'Is' of predication and of identity [Russell]
21552 We must make common speech more precise [Russell]
18274 Analysis complicates, to meaning's limit [Wittgenstein]
6429 All complex statements can be analysed [Wittgenstein]
2938 Limits of language limit my world [Wittgenstein]
18732 We can use 'truth', so don't need a theory [Wittgenstein]
17651 Without words we have no world [Goodman]
21960 Ordinary language is just the beginning [Austin,JL]
7921 Best philosophy studies actual word usage [Strawson,P]
5486 Essentialism says linguistic analysis is bad [Ellis]
8349 Ontology must be deduced from normal talk [Davidson]
16512 Prefer semantic facts to big fictions [Wiggins]
13974 Does analysis of meaning need a philosopher? [Soames]
3312 The 'is' of predication, identity & existence [Benardete,JA]
7001 Beginning philosophy with language is a trap [Heil]
6887 Analyse language to solve problems [Mautner]
10308 Object-existence is a language question [Hale]
14092 We should tolerate ordinary language more [Rosen]
7923 Some verbal terms have no ontology [Macdonald,C]
16325 Linguistic analysis seeks revision of language [Halbach]
4465 'Is': existence,predication,identity,classify [PG]

6. Logical Analysis

Using logic as a tool for analysing concepts and truths

19231 Metaphysics is logic, which is maths [Peirce]
15948 Formality avoids unnoticed assumptions [Frege]
21546 Sharp distinctions need symbols [Russell]
21573 Philosophy problems are logical, or void [Russell]
6116 Ordinary language is too deceptive [Russell]
8996 If if time is money then if time is not money- [Quine]
15802 Use variables to stabilise reference [Chisholm]
15210 If necessity is logical, analysis is logic [Harré/Madden]
13515 Sets are vital for studying any abstraction [Hart,WD]
9766 First logic, then language, then reality [Fine,K]
11051 Frege's logic dominates analysis [Hanna]

7. Limitations of Analysis

why analysis is trivial, limited or hopeless

1645 Total analysis is opposed to philosophy [Plato]
22 Precision is not always possible [Aristotle]
14165 Analysis false, if parts are less than whole [Russell]
18714 Philosophy knows what it wants to know [Wittgenstein]
5195 Analysis shows parts and not structure [Ayer]
21839 Objections contribute nothing [Deleuze]
17663 Analysis is pointless or impossible [Armstrong]
2557 How do we distinguish good and bad analysis? [Rorty]
2481 Nothing ever reduces to anything [Fodor]
2958 No analysis has yet been successful [Lockwood]
17082 Analysis is redundant or impossible [Ruben]
3352 Analytical philosophy lacks synoptic vision [Benardete,JA]
10571 Love of rigour can impede understanding [Fine,K]
6881 Analytical philosophy is trivial and technical [Mautner]
9978 Focus on what is said, not its expression [Tait]
9297 You can't understand love in terms of 'iff' [Svendson]
9136 All analyses are either trivial or false [Sorensen]
11147 We want explanation, not intuitions [Margolis/Laurence]

G. Scientific Philosophy

1. Aims of Science

knowledge gained by experiments

76 Science aims at necessary truth [Aristotle]
2200 Science assumes resemblance of future to past [Hume]
6782 Realism explains science's success [Putnam]
6601 Science rules through power, not reason [Feyerabend]
3853 Can we explain scientific change rationally? [Newton-Smith]
3859 Science wants to both predict and explain [Newton-Smith]
3870 How do we choose between explanations? [Newton-Smith]
3329 Science is true, but what does it mean? [Benardete,JA]
5334 Science cannot provide ethical wisdom [Flanagan]
4588 There is no such thing as plain 'science' [Heil]
3123 Science carves nature at the joints [Segal]
6779 Instrumentalists define words ostensibly [Bird]

2. Positivism

belief in science as the only route to truth

12106 Positivism seeks laws, not truth [Comte]
12111 Positivism is our culmination [Comte]
7491 Theology, then metaphysics, then positivism [Comte]
15873 Laws are regularities of sensation [Mach]
15236 Positivism: science is just experiences [Harré/Madden]
3854 Positivists think observation terms unchanging [Newton-Smith]
3855 Maybe theory and observation aren't separate [Newton-Smith]
4222 Measurement needs people and instruments [Lowe]

3. Scientism

science is the way to solve philosophical problems

3653 My physics rests on my Meditations [Descartes]
8935 Without philosophy science is futile [Hegel]
12114 We need general scientists too [Comte]
12116 Positivism will solve social crises [Comte]
14764 I am saturated with physical science [Peirce]
14782 Philosophy is an experimental science [Peirce]
14859 Philosophy decides sciences scope and value? [Nietzsche]
20143 Science rests on philosophical 'faith' [Nietzsche]
5434 Philosophy and science are the same [Russell]
8378 Philosophers learn science from each other [Russell]
6117 Philosophy needs science, to reduce error [Russell]
7081 Philosophy is part of empirical science [Neurath]
5179 Philosophy is the left-overs of science [Ayer]
16943 Philosophy is continuous with science [Quine]
6267 Knowledge is wider than science [Putnam]
6272 'True' is basic to science, but not scientific [Putnam]
1489 Philosophy can be scientific or problem-based [Nagel]
13407 Philosophy is synthetic and empirical [Papineau]
7068 Rejection of science brings obscurantism [Critchley]
6844 Scientism has faith in science and causation [Critchley]
20449 Science worldviews are too theoretical [Critchley]
6123 Ontologists investigate holes and colours [Merricks]
11054 Scientist rests on the exact sciences [Hanna]
19675 Philosophers understand science best? [Meillassoux]
14897 Science should overrule all intuitions [Ladyman/Ross]
14905 Science is supreme because of error filters [Ladyman/Ross]
14936 Basic physics is wildly uncertain [Ladyman/Ross]

14001 Science is riddled with philosophy [Markosian]
16567 Expert on nil, or ignorance on everything? [Sagan,D]

H. Continental Philosophy

1. Continental Philosophy

key shared characteristics of continental modern philosophy

22082 Swapping reasons doesn't produce truth [Hegel]
21984 We must break up rigid understanding [Hegel]
6904 Modern philosophy abandons the physical [Feuerbach]
6931 Empiricism is right, but forgets the observer [Feuerbach]
21901 'Difference' is that which eludes capture [Deleuze]
21841 We must commit to and use new words [Deleuze]
7423 Philosophy and politics are linked [Foucault]
6841 Baudrillard is a relativist [Baudrillard]
8223 Conservatism and mere criticism are a plague [Deleuze/Guattari]
8988 Two marxist ideas dominate in France [Scruton]
7075 Human division needs a Big Idea [Critchley]
7069 French return to Hegel, Nietzsche or Marx [Critchley]
6835 Idealists tried to unify Kantian dualities [Critchley]
6837 Philosophy is now social and historical [Critchley]
6836 Continental philosophy fights nihilism [Critchley]
6838 Key ideas are critique, praxis, emancipation [Critchley]
6845 You can't explain reality with one big thing [Critchley]
6859 Analytical is more rigorous than continental [Williamson]
21900 Deleuze likes Spinoza, Bergson, Nietzsche [May]

2. Phenomenology

approaching wisdom by examining human experience

3348 Non-synthetic phenomenalism is literature [Benardete,JA]
15570 Phenomenology is the science of essences [Husserl]
7614 Bracketing subtracts entailments about reality [Husserl]
6893 Phenomenology describes experience directly [Husserl]
22216 Phenomenology studies mental correlations [Husserl]
22218 A science of mind must be essentialist [Husserl]
22217 Phenomenology validates objects [Husserl]
22219 Phenomenological construction is idealist [Husserl]
22204 Start thought the intuitive self-given [Husserl]
22207 We bracket judgements, even about certainties [Husserl]
22208 We bracket all spatio-temporal judgements [Husserl]
22210 Pure consciousness has its own being [Husserl]
22215 Phenomenology describes purified consciousness [Husserl]
21217 Phenomenology is presuppositionless thought [Husserl]
22223 Being is projection, thrownness, fallenness [Heidegger]
22158 Phenomenology seeks things themselves [Heidegger]
7113 All consciousness is of something [Sartre]
8247 Phenomenology needs art as logic needs science [Deleuze/Guat]
6846 Phenomenology clarifies our social world [Critchley]
20448 Phenomenology reveals pre-theory [Critchley]
20744 All experience is about something [Aho]
21237 Skip theory - start with lived experience [Bakewell]
21238 Later phenomenology is more social [Bakewell]

3. Hermeneutics

seeking rhetorical explanation instead of hard facts

5435 Interpreters understand more than authors [Schleiermacher]
22028 Understanding precedes full grasping [Schleiermacher]
5437 Positivism challenges hermeneutic knowledge [Mautner]
20925 Hermeneutics blunts truth [Derrida]
20934 Hermeneutics wipes out others' differences [Derrida]
21892 Meaning is buried in interpretations [Derrida]
5438 Hermeneutics is sympathetic or hostile [Ricoeur]
5439 Interpret the whole or the part first? [Mautner]
15575 Seek better interpretations, not static truths [Pol't]

4. Linguistic Structuralism

understanding mind and knowledge by studying linguistic structures

15038 Structuralism abstracted events [Foucault]
21895 Structuralism neglects dynamic meaning [Derrida]
6161 Structuralism replaces categories by language [Rowlands]
21944 Structuralism explains what is unconscious [Gutting]

5. Critical Theory

social theories aiming at awareness of their own context

15661 Theory is interdisciplinary and self-aware [Horkheimer]
15663 Apply critical theory to the Enlightenment [Adorno/Horkheimer]
15665 Study society through language use [Habermas]

6. Deconstruction

wisdom can only draw attention to human presuppositions

8210 Deconstruction gives history and repressions [Derrida]

8211 Différance creates opposed concepts [Derrida]
8216 Deconstruction is not neutral; it intervenes [Derrida]
6840 Justice is undeconstructable [Derrida]
21881 Explore the limits of expression [Derrida]
21883 Fictions make sincerity impossible [Derrida]
21882 Context makes sentences contradictory [Derrida]
21934 Concepts of being and meaning self-destruct [Derrida]
8987 In deconstruction technicalities just float [Scruton]
8992 Deconstruction is romanticism's end [Scruton]
22234 Post-structuralism denied the subject [Oksala]

2. Reason

A. Nature of Reason

1. On Reason

general role of reason in mind and living

1502 Only accept what is necessarily true [Simplicius]
224 Metaphysics should stick to abstract ideas [Plato]
243 Folly is the soul resisting its natural reason [Plato]
2676 Didactic argument concerns subjects not pupils [Aristotle]
11283 Deductive reason, and demonstration [Aristotle]
1848 Reason forces us to agree to a truth [Aquinas]
4017 Descartes made rationality internal [Descartes]
16897 Reason is what grasps apriori necessity [Leibniz]
13009 Reasons lead to assent [Leibniz]
6253 Reason is the power of finding truth [Hutcheson]
19767 Reason leads to prudent selfishness [Rousseau]
5604 All reasoning begins voluntarily [Kant]
5622 The limits of reason must be fixed a priori [Kant]
5623 We can know a totality from a sample [Kant]
21416 Philosophers should not offer multiple proofs [Kant]
7083 Truth and good must follow beauty [Hegel]
21974 Rational minds see a rational world [Hegel]
17892 Reason can answer the rational questions [Gödel]
3811 Inference is a human activity, not rules [Searle]
3822 Theory is a sub-division of practice [Searle]
3099 Inference is never a conscious process [Harman]
19304 Rules of reasoning are not rules of logic [Harman]
19306 In reasoning, avoid mental clutter [Harman]
19307 Reasoning often bypasses inconsistencies [Harman]
19309 Reasoning only cares about immediate logic [Harman]
6950 Rationality needn't be consistent [Harman]
9429 Deductively invalid reason can be useful [Mumford]
4767 Rational beliefs are supported by reasons [Psillos]
20955 Reason can be extended by art [Bowie]
6585 Inconsistency illusion & doubt threaten reason [Fogelin]
5750 Consistency depends on what is possible [Melia]
8952 Reflective Equilibrium: intuition/theory match [Fisher]

2. Logos

broad Greek concept of understanding or giving reasons

414 There are universal laws, ignored by most [Heraclitus]
1570 Humans are the only animals with logos [Aristotle]
1575 Aristotle's logos is rational talk about value [Roochnik]
20775 Canons, criteria, definitions - for truth [Stoic school]
21393 The universe embodies human logos [Stoic school]
21810 There is spoken logos, and thought logos [Stoic school]
6294 Logos begins, is divine, and is God [John]
1569 Descartes had too narrow a view of reason [Roochnik]
15574 'Logos' means 'making something manifest' [Heidegger]
9197 Logos is a demand for universal reason [Hadot]
7420 The logos is the person [Foucault]
17950 Logos lets us track particulars [Nehamas]
17951 Logos refers to a wide domain [Nehamas]
1571 Logos has three very different meanings [Roochnik]
1572 'Logos' was later identified with 'techné' [Roochnik]
1573 Logos requires giving reasons for opinions [Roochnik]
1592 Reason is based on a desire for truth [Roochnik]
1593 Reason is the highest of human desires [Roochnik]
1603 Logos requires others to engage in it [Roochnik]

3. Pure Reason

idea of reason as independent of natural constraints

350 Body is misleading, but thought brings truth [Plato]
17194 Reason is general, so timeless, so eternal [Spinoza]
4840 Reason sees things as eternal [Spinoza]
19335 For God, reasoning has a natural order [Leibniz]

5578 Pure reason handles concepts [Kant]
5603 Pure reason is outside of time [Kant]
5616 Pure reason is confined to understandings [Kant]
5628 Reason hates to be limited in its speculations [Kant]
21054 Reason endlessly extends rules and intentions [Kant]
22081 Let thought follow its own course [Hegel]
10804 Thoughts have a natural order [Frege]
8251 A natural space of reasons enables freedom [McDowell]
3651 Reason is essentially perceiving necessities [Bonjour]

4. Aims of Reason

what good reasoning aims to achieve

241 We should follow reason [Plato]
5082 Reason is general, senses particular [Aristotle]
72 Rationality concerns variables & invariables [Aristotle]
1574 Logos distinguishes what is right and wrong [Aristotle]
2675 Reason is necessarily linked statements [Aristotle]
1589 Aristotle believes nature can be understood [Roochnik]
1858 Only necessary truths compel our assent [Aquinas]
3603 Be cautious, analytical, systematic, panoramic [Descartes]
2248 Doubt uncertain ideas as much as false ones [Descartes]
19917 Without reason human life is misery [Spinoza]
17213 Rational people always agree [Spinoza]
5035 Contradiction and reason-giving are basic [Leibniz]
3346 Reason is non-contradiction and sufficiency [Leibniz]
18236 Reason seeks complete explanation [Kant]
21439 Only respect what can be openly criticised [Kant]
5584 Objections are dogmatic, critical or sceptical [Kant]
3738 Rational beings set themselves ends [Kant]
6937 Reasons discovers unknown from the known [Peirce]
14779 I reason in order to avoid surprises [Peirce]
20573 Reason is communicative, not instrumental [Habermas]
3077 Reason might be defined by its functional role [Harman]
19303 Inference can revise logical results [Harman]
12324 Consensus is the enemy of thought [Badiou]
1598 Logos for intelligibles, poetry for chaos [Roochnik]
16841 Practical inference has six virtues [Lipton]
4731 Reason likes consistency, coherence & evidence [O'Grady]
20981 What is the value of reason? [Sen]

5. Objectivity

seeing reality without a personal point of view

22024 If subjectivity is first, what of objectivity? [Pinkard]
22037 Objectivity is by Geist, not correspondence [Hegel]
15626 Our categories are crucial but distorted [Hegel]
5297 The 'truth' of thinking is a practical matter [Marx]
9832 Frege sees no 'intersubjective' category [Dummett]
8414 Separate psychology from logic [Frege]
7740 Thoughts exist outside space and time [Frege]
4545 Maybe 'objective' is a degree of subjective [Nietzsche]
17621 Objectivity matters, not objects' existence [Dummett]
8868 Objective truth is interpersonal [Davidson]
3969 We assess other rationalities subjectively [Davidson]
3972 Truth and objectivity need a community [Davidson]
20989 Objective views don't rely on a situation [Nagel]
3248 Scepticism results from claims of objectivity [Nagel]
7975 Philosophy aims to unmask objectivity [Baudrillard]
21373 Objectivity is detachment from the world [Janaway]
19649 Modern objectivity is defined via language [Meillassoux]
20982 Objectivity needs varied perspectives [Sen]
20923 We participate in objective truth [Zimmermann,J]
20926 Hermeneutics embraces interpretations [Zimmermann,J]

6. Coherence

principles of mutual support between propositions

2082 Perhaps logos is weaving indefinable names [Plato]
1672 Everything could prove everything else [Aristotle]
17638 P implyn Q increases certainty of both [Russell]
2764 Coherence needs consistency and entailments [Blanshard]
17070 Coherence: consilience,simplicity,analogy,fit [Smart]
17072 Coherence must also be comprehensive [Smart]
12596 Reasoning tries to increase coherence [Harman]
12599 Reason should preserve current beliefs [Harman]
6954 Coherence is a set of best explanations [Harman]
9784 Coherence can't make falsehoods true [Cartwright,R]
4262 Evidence is irrelevant to consistency [Goldman]
12770 We construct falsehoods to get the 'best'? [Fraassen]
8833 Why should we prefer coherent beliefs? [Klein,P]

8797 Denial of my headache is quite coherent [Sosa]
8877 Coherentists can't just dump misfit beliefs [Sosa]
3700 The authority of coherence is unprovable [Bonjour]
8893 Every area has multiple coherent systems [Bonjour]
10237 Coherence is intuitive and primitive [Shapiro]
17596 Coherence maximises constraint satisfaction [Thagard]
17597 There are six kinds of coherence [Thagard]
17598 Explanatory coherence has 7 principles [Thagard]
12801 Simple, conservative, explanatory beliefs [Foley]
8616 Combined unlikelyhoods become likely [Elgin]
8617 Explain coherence by saying it is true [Elgin]

7. Status of Reason

importance of reason in human life

7989 Seek salvation in the wisdom of reason [Anon (Bhag)]
362 Everyone should enjoy argument [Plato]
2801 Intelligence rules, bodily strength is slave [Aristotle]
623 Thought is the most godlike thing we know [Aristotle]
501 Reasoning is more powerful than gold [Democritus (attr)]
2857 Descartes was purely rational, and superficial [Nietzsche]
6222 If a decision is rational, everyone can agree [Cumberland]
12526 Opposition to reason is mad [Locke]
12963 Opposing reason is opposing truth [Leibniz]
3807 Reason is rightly slave to the passions [Hume]
6912 For Fichte our religion is human reason [Fichte]
20379 Reason is an emergent organic drive [Nietzsche]
4530 Reason is just a human idiosyncrasy [Nietzsche]
2896 Why does reason = virtue = happiness? [Nietzsche]
2899 The Greeks embraced reason in desperation [Nietzsche]
21945 Reason is an instrument of domination [Foucault]
18543 Are aesthetic reasons truth reasons? [Scruton]

8. Naturalising Reason

explaining reason as part of the natural world

22035 Reason is social and historical [Hegel]
3812 Rationality is coordination of intentionality [Searle]
3806 Rationality is built into intentionality [Searle]
2463 Naturalism and rationality are compatible [Fodor]
2505 Turing had the idea of mechanical rationality [Fodor]
1584 Science seeks reason, but undermines it [Roochnik]
3125 Rationalisation leads to mental causation [Segal]

9. Limits of Reason

extent to which our reason can reveal truth

21264 Mortals can't be fully rational [Plato]
19740 A hungry man can be paralysed by choice [Aristotle]
1800 Reason can only be destroyed using reason [Pyrrho]
1812 All discussion is uncertain and contradictory [Agrippa]
1813 Chains of reasoning never terminate [Agrippa]
1811 Proofs often beg the question [Agrippa]
1815 Preliminary assumptions are arbitrary [Agrippa]
1403 Rational donkeys starve from indecision [Buridan]
6675 The heart has its reason [Pascal]
19433 The Buridan's Ass case is impossible [Leibniz]
8099 Truths of reason instruct but don't illuminate [Joubert]
8932 Just giving reasons won't produce truth [Hegel]
6558 Foolish consistency is small-minded [Emerson]
4523 What can be 'demonstrated' is of little worth [Nietzsche]
8594 Impossibilities can have rational support [Shoemaker]
3092 Rational people believe they've false beliefs [Harman]
7986 Being drunk can be the safer course [Baudrillard]
8062 Proof is an empty idea in philosophy [MacIntyre]
3801 Rationality requires a commitment to values [Dennett]
1591 Reason cannot prove itself to be valid [Roochnik]
1599 Debate about reason presupposes reason [Roochnik]
18781 Inconsistency doesn't terminate reasoning [Mares]
6557 A rich consistent world view may be impossible [Fogelin]
6568 Games are playable with inconsistent rules [Fogelin]

B. Laws of Thought

1. Laws of Thought

basic axioms of human reason

19404 Contradiction and sufficiency cover it all [Leibniz]
19360 Generalities are foundations for thought [Leibniz]
7807 Laws of thought are true but not axiomatic [Bolzano]
6933 Laws of thought are laws of reality [Feuerbach]
8939 Track truth; don't just describe thought [Frege]
5396 Identity, contradiction, and excluded middle [Russell]

5405 Contradiction refers to things, not thoughts [Russell]
9131 Linked clear sentences become unclear [Sorensen]
6560 Noncontradiction is basic to rationality [Fogelin]

2. Sufficient Reason

claim that there is a reason for everything
1496 Symmetry requires the earth to be stationary [Anaximander]
20910 Everything must happen for a reason [Democritus]
306 All existence has a cause [Plato]
5969 The uncaused is non-existent [Chrysippus]
4819 Every existence has a necessary cause [Spinoza]
5042 Every event has a reason [Leibniz]
3347 Sufficient reason is synthetic a priori [Leibniz]
2098 There is always a reason why things are thus [Leibniz]
4642 Things are real or true only for some reason [Leibniz]
3646 Things are always how they are for reasons [Leibniz]
2104 Nothing could limit matter, so it is unlimited [Leibniz]
18241 Existence contradiction implies suff reason [Wolff]
19807 Nature and reason are always caused [Rousseau]
5563 Experience needs sufficient reason [Kant]
5565 Principle of sufficient reason is unprovable [Kant]
19661 Sufficient reason undercuts non-contradiction [Hegel]
21918 Sufficient Reason can't be proved [Schopenhauer]
4187 Everything has a reason, demanding 'Why?' [Schopenhauer]
4643 Reasons for things may not be causal [Baggini /Fosl]
14018 Is Sufficient Reason self-refuting? [Bourne]
19666 Sufficient Reason makes the world a mystery [Meillassoux]
17263 Sufficient Reason denies fundamentals [Correia/Schnieder]

3. Non-Contradiction

a proposition is claimed to be both true and false
12268 Contradiction is impossible [Antisthenes (I)]
6561 Things cannot be in and not-in other things [Aristotle]
11281 Something is F and not-F is unsayable [Aristotle]
1601 Contradictions cannot be true at the same time [Aristotle]
1602 Noncontradiction is basic to meaningful speech [Roochnik]
11282 Non-contradiction is not assumed [Aristotle]
9108 From an impossibility anything follows [William of Ockham]
21983 Being and nothing: the same and not the same [Hegel]
21985 The world is full of contradiction [Hegel]
15616 Might our concepts be contradictory? [Hegel]
14787 Possibility shows contradiction, not vice v [Peirce]
4531 It is contingent that we can't affirm & deny x [Nietzsche]
17632 Non-contradiction was learned from instances [Russell]
6566 What status has contradiction in civil life? [Wittgenstein]
9023 Denial of contradiction changes the subject [Quine]
6564 Affirming p¬-p is misusing 'and' or 'not' [Quine]
9123 In doorways we are in and not-in a room [Priest,G]
4633 Denying non-contradiction is irrational [Baggini /Fosl]
6565 Noncontradiction splits assertion from denial [Fogelin]
19656 Non-contradiction is a fact about thinking? [Meillassoux]

4. Contraries

could both be false, but can't both be true
192 Only one thing can be contrary to something [Plato]
4333 Contraries are as far apart as possible [Aristotle]
1697 Contrary to good is bad, but not vice versa [Aristotle]
1698 Both parts needn't exist among contraries [Aristotle]
1708 Which of just, not-just & unjust are contrary? [Aristotle]
1684 Falsehoods can contradict one another [Aristotle]
608 Contrariety has degrees, unlike contradiction [Aristotle]
16854 Contraries always entail contradictories [Lipton]

5. Opposites

concepts held to be totally opposed to each other
416 Harmony arises from opposites [Heraclitus]
425 Opposition creates harmony, as in a bow [Heraclitus]
232 Opposites are as unlike as possible [Plato]
628 There is no opposite to matter [Aristotle]
627 'Everything is opposites' implies a regress [Aristotle]

6. Ockham's Razor

'Do not multiply entities beyond necessity'
21267 More principles than necessary is superfluous [Aquinas]
16676 Why use more things when fewer will do? [William of Ockham]
6806 Don't multiply entities beyond necessity [William of Ockham]
19342 Reason keeps things sparse and simple [Leibniz]
4541 Everything simple is merely imaginary [Nietzsche]
6106 Reducing entities reduces error [Russell]
2939 Occam implies that meaning is use [Wittgenstein]

8207 Quests for simplicity can increase entities [Quine]
8208 Generalisation in maths needs entities [Quine]
4036 What matters is kinds of entities, not numbers [Armstrong]
3426 Reductionism reduces our assumptions [Kim]
21021 Keep premises as weak as possible [Nussbaum]
15784 A Razor is irrelevant for Meinongians [Lycan]
15787 Is the Razor an aesthetic principle? [Lycan]
7037 Seek simple theories, not a simple world [Heil]
7038 Simple principles could imply many entities [Heil]
10471 Believe only in what is causal? [Oliver]
8964 Mutliplied entities, or multiplied categories? [Hoffman/Rosenkrant]
4037 Belief in entities require reasons [Mellor/Oliver]
4217 Revise ontology sooner than logic [Lowe]
4456 Either we demand simplicity, or reality does [Moreland]
16244 The Razor assumes an unprofligate universe [Maudlin]
16255 Always prefer one cause for multiple events? [Maudlin]
13743 Don't multiply BASIC entities [Schaffer,J]
16677 Anti-Razor: keep on positing, if you must [Pasnau]

C. Styles of Reason

1. Dialectic

approaching truth by discussion and analysis
164 It is legitimate to play the devil's advocate [Socrates]
13778 Dialecticians ask and answer questions [Plato]
2151 Dialectic takes nothing for granted [Plato]
2154 Dialectic requires taking an overview [Plato]
4011 Rationality is a vision of cosmic order [Plato]
8937 'Parmenides' is the masterpiece of dialectic [Hegel]
287 Dialectic categorises things [Plato]
1644 Dialectic is simply good philosophising [Plato]
5847 Dialectic surveys syllogisms [Aristotle]
12260 Dialectic starts from agreement [Aristotle]
2677 Dialectical arguments aim at contradiction [Aristotle]
7282 Disagreement means you do not understand [Chuang Tzu]
2670 Epicurus laughed at dialectic [Epicurus]
20768 Dialectical arguments are clever but useless [Ariston]
20776 Dialectics is question-and-answer [Stoic school]
2661 Dialectic is spoken logical argument [Cicero]
3035 Dialectic is short questions and answers [Diog. Laertius]
22102 Disagreements enhance the truth [Aquinas]
5602 Dialectic is part of the sceptical method [Kant]
20952 Dialectic is 'negation of the negation' [Hegel]
21766 Dialectic is instability creating new thoughts [Hegel]
21978 Dialectic is negation and not-negation [Hegel]
15615 Assuming true or false is dogmatism [Hegel]
21767 Dialectic is seen in popular proverbs [Hegel]
15638 Dialectic is the soul and unity of science [Hegel]
15639 Plato made dialectic more objective [Hegel]
19444 Truth is refutation of the antithesis [Feuerbach]
19445 Dialecticians are their own opponents [Feuerbach]
2897 With dialectics the rabble gets on top [Nietzsche]
19630 Great ideas don't arise from dialogues [Cioran]
21842 Don't assess ideas, relate them [Deleuze]
21850 Dualisms can be modified [Deleuze]
82131 analyse what blocks dialectics [Derrida]
7982 Now thesis and synthesis cancel out [Baudrillard]
13883 To grasp a philosophical idea, defend it [Wright,C]
4635 Dialectic for unity, analysis for parts [Baggini /Fosl]

2. Elenchus

Socrates' use of interrogation for philosophy
1647 Socratic debate needs asserted premises [Vlastos]
115 Socrates welcomes correction [Socrates]
22099 The elenchus reveals the truth within [Socrates]
5844 Each stage of an argument needs agreement [Socrates]
1654 For Socrates the elenchus decides moral truth [Vlastos]
4321 Test ourselves by question and answer [Plato]
2093 Always say what you believe [Plato]
20478 We show a person's opinions are in conflict [Plato]

3. Eristic

argument as a competition rather than for truth
2130 Dialectic requires analysis [Plato]
2052 Eristic is combative, dialectic co-operative [Plato]
2674 Competitive argument has five targets [Aristotle]
7284 Is the winner of an argument right? [Chuang Tzu]
2556 Rational certainty may be victory in argument [Rorty]

8224 'Eris' was the divinity of conflict [Deleuze/Guattari]

D. Definition

1. Definitions

specifying one word by means of others
12291 Things have unique definitions [Aristotle]
12292 Definitions can be very long [Aristotle]
10953 Definitions are isomorphic to entities [Aristotle]
10957 Some definitions must include material [Aristotle]
10960 Does a definition create a unity? [Aristotle]
19426 Nominal definitions just individuate [Leibniz]
15927 Six tools suffice for maths definitions [Weyl]
19179 Definition needs words, rules and structure [Tarski]
1623 Definition depends on synonymy [Quine]
15227 Definitions have necessary predicates [Harré/Madden]
5831 'Water' is a name, with no definition [Schwartz,SP]
15457 Interdefinitions need external understanding [Lewis]
6052 Definitions presuppose identity [McGinn]
11215 We can cite famous definitions [Gupta]
11223 Term, then definiendum, then definiens [Gupta]
14100 The definiens need not be parts of a thing [Rosen]
11257 Pythagoreans started definitions [Politis]
20389 If requirements guarantee, they define [Davies,S]

2. Aims of Definition

what a definition is trying to achieve
16125 Divide and strip, to reveal a nature [Plato]
16124 We don't define 'weaving' for weaving's sake [Plato]
17237 Definitions of caused things must show origin [Hobbes]
16541 A definition implies all intrinsic properties [Spinoza]
5618 Definitions completely exhibit concepts [Kant]
18261 Definition is a complete simplification [Kant]
9821 Definitions aim for reference, not sense [Frege]
13886 Only complete definitions will do [Frege]
8368 Correct definition are perfect substitutes [Ducasse]
4955 Definition can give reference or meaning [Kripke]
15527 Definitions eliminate or vindicate [Lewis]
11225 Define one object across all worlds? [Gupta]
11227 Definitions may try to improve output [Gupta]
17774 Definitions make intuitions useful [Mayberry]
20221 Definition needs precision, and much more [Zagzebski]
10528 Definitions concern speech, not reality [Fine,K]
9641 Definitions must be replaceable and uncreative [Brown,JR]
15352 Definitions allow elimination of defined terms [Horsten]
16292 Explicit definition enables elimination [Halbach]

3. Types of Definition

whether there are different sorts of definition
16094 Definitions are too general for particulars [Aristotle]
12983 Nominal definition of surface, real of depth [Leibniz]
16877 'Constructive' definitions create new signs [Frege]
4417 Things with a history are indefinable [Nietzsche]
14426 Extensional and intensional definitions [Russell]
13838 Definitions now need a semantics [Hacking]
11221 Three sorts of adequacy for definitions [Gupta]
11224 Old definitions: reductive sentence identities [Gupta]
11226 Traditional definitions meet 4 criteria [Gupta]
9143 There are three types of definition [Fine,K]
10143 'Creative definitions' don't presume objects [Fine,K]

4. Real Definition

give the true nature of something, not just a description
15854 Woven names match complex elements [Plato]
8200 Aristotle defines things by essences [Aristotle]
12145 Real definitions are universal [Aristotle]
12384 Ordered thorough predicates define things [Aristotle]
9066 Differences and similarities for definitions [Aristotle]
12075 Aristotelian definitions are causal [Aristotle]
10944 A definition must be of something primary [Aristotle]
596 Only substance can be defined [Aristotle]
12360 Definitions need complexity, not category [Aristotle]
16107 Essence definition sometimes names parts [Aristotle]
15957 Definitions give discriminations and natures [Boyle]
12915 Only possibilia have real definitions [Leibniz]
12976 Weak knowledge gives multiple definitions [Leibniz]
12982 Single essences have multiple definitions [Leibniz]
12984 Real definitions display possibilities [Leibniz]
11920 Real definitions give identity properties [Molnar]

11217 Chemists real, lexicography nominal definition [Gupta]
12302 Aristotelian definitions are hierarchical [Fine,K]
11157 Real definitions are thought to be dead [Fine,K]
14259 Two objects may need real definitions together [Fine,K]
9959 'Real' definitions give essences [Mautner]
9376 Definitions can also assert facts [Boghossian]
15118 Definitions are the end product of science [Koslicki]
17311 Real definitions single out, and explain [Koslicki]
16030 Nominal definitions miss out on the essence [Jones,J-E]

5. Genus and Differentia

its class, and then its distinguishing feature
12355 Square has genus 'plane', corners differences [Plato]
12261 Differentia are generic [Aristotle]
12263 'Genus' is a shared part of essences [Aristotle]
12272 Differentiae describe a particular [Aristotle]
12279 Differentia don't give the essence [Aristotle]
12283 Assign the genus first in definitions [Aristotle]
12289 Genus and differentia are essence [Aristotle]
4385 Genus and differentia create a definition [Aristotle]
12352 General properties rest on individuals [Aristotle]
11383 Definitions give universal and kind [Aristotle]
10961 Definition by division: genus/differentiae [Aristotle]
12356 Definition is an account of differentiae [Aristotle]
17040 Defining one thing also defines many [Aristotle]
12081 Definitions aren't unique to individuals [Aristotle]
12353 Species and genera irrelevant later on [Aristotle]
13070 General definition can't define Socrates [Aquinas]
11197 Definitions are what sort things [Aquinas]
17239 Definition is genera, then the difference [Hobbes]
12538 Genus and species are partial ideas [Locke]
12980 Genus and differentia can be swapped [Leibniz]
14266 Genus and differentiae give a hierarchy [Fine,K]
12242 Definition differs from individuation [Oderberg]
12249 Animal the genus, rational the difference [Oderberg]

6. Definition by Essence

essence as what figures in a successful definition
11389 Socrates sought essences, for logic [Socrates]
12285 Definition is of just one thing [Aristotle]
12382 What it is is why it is [Aristotle]
12080 Some necessities are not definitional [Aristotle]
11153 Definition is the account of essence [Aristotle]
16797 Did Locke give the essence of a person? [Locke]
11216 Varied definitions imply varied essences [Gupta]
11171 Defining just is giving the essence [Fine,K]
11178 Define essence by properties or propositions [Fine,K]
16539 Circle defined shows nature and generation [Lowe]
16540 Some definitions don't reveal essences [Lowe]
16548 Essence is not some entity in its own right [Lowe]
19291 Full definition give type, and individuality [Hale]
15116 Essence causes, definition shows, necessities [Koslicki]

7. Contextual Definition

definition relying wholly on facts about context
9844 Frege later rejected contextual definitions [Frege]
9822 Conceptual priority - then definition [Frege]
9845 You can't define a word by its expression [Frege]
21560 Much language needs context for meaning [Russell]
8995 Definitions can be relative or absolute [Quine]
19047 Definitions can save non-denoting terms [Quine]
19048 Contextual definition makes sentences central [Quine]
9847 Contextual definition can replace expressions [Dummett]
10476 We can't 'implicitly' define concept groups [Hodges,W]
10142 Can contextual definition define numbers? [Wright,C]
9961 Contextual definitions replace wholes [Mautner]
10204 'Implicit definitions' just describe relations [Shapiro]
18776 We can eliminate descriptions from contexts [Linsky,B]
9955 Contextual definition replaces whole sentences [George/Velleman]

8. Impredicative Definition

definition that doesn't introduce a new concept
17241 Definitions mustn't contain the defined name [Hobbes]
15924 Predicative defs don't create objects? [Zermelo]
10041 Impredicative Definitions refer to totalities [Gödel]
18137 Impredicative defs change the definiendum? [Bostock]
21704 Fixing class by greater class is impredicative [Linsky,B]
10031 'Impredicative' refers to the definiens itself [George/Velleman]
8721 Impredicative definitions use the defined term [Friend]

10882 Predicative definitions refer to externals [Horsten]

9. Recursive Definition

specify one item, and a rule to produce more of them
9958 Recursive definition links instances [Mautner]

10. Stipulative Definition

definition by simply decreeing what a concept means
11219 Only stipulative definitions in maths? [Frege]
11218 Stipulative definition of new meanings [Gupta]
9960 Stipulative definition decides a meaning [Mautner]
8680 Do definitions refer to or create objects? [Friend]

11. Ostensive Definition

definition by pointing out one or more examples
10019 Define the complex, point to the simple [Frege]
21551 Ostensive definitions are partly indexical [Russell]
18889 Ostension doesn't need actual pointing [Salmon,N]
11220 Ostensive definition looks simple but isn't [Gupta]
9957 Ostensive definitions point to an object [Mautner]
16549 'Red' can be ostensively defined [Lowe]

12. Paraphrase

expressing a concept in a more convenient way
21699 Russell paraphrased commitments away [Quine]
14227 Tables are 'xs arranged tablewise' [Inwagen]
8262 Semantics can't split ontology of paraphrases [Lowe]
10314 Genuine singular terms can't be eliminated [Hale]
18491 'This makes him your cousin' is elucidation [Künne]
10633 'Some critics admire only one another' - how? [Linnebo]
18861 Can we paraphrase numbers away? [Tallant]

13. Against Definition

pursuit of definition is hopeless or pointless
602 Definition may be impossible, only similarity [Antisthenes (I)]
5619 No a priori concept can be defined [Kant]
22201 Maths-style definition are bad in philosophy [Husserl]
14115 Analysis neglecting the whole won't define [Russell]
14159 Definition are superfluous in mathematics [Russell]
12619 Definitions all use indefinables! [Fodor]
9331 How do statements and definitions differ? [Horwich]
12585 Most people can't even define a chair [Peacocke]
14981 Philosophy contains few definitions [Sider]
15015 Can a correct definition be false? [Sider]
20391 Phoney definitions can be tools of repression [Davies,S]

E. Argument

1. Argument

reasoning and persuasion in general
3993 Arguments serve to explain, not to coerce [Lewis]
20220 Counterexamples just show inaccuracy [Zagzebski]
6856 Valid arguments can still be rejected [Martin,M]
19215 Modus tollens can reply to modus ponens [Merricks]
19504 My modus ponens is your modus tollens? [Pritchard,D]
19115 'Rebut' conclusions; 'undercut' premises [Antonelli]
18405 'Teepee' arguments have several supports [Cappelen/Dever]
19023 Slippery slope demands non-arbitrary boundary [Vetter]

2. Transcendental Argument

backwards reasoning to accepting presuppositions
5577 Three requirements for transcendental ideas [Kant]
2470 Transcendental arguments have preconceptions [Fodor]
21443 Transcendental proofs derive necessities [Gardner]

3. Analogy

attempting proof by comparison with similar cases
15770 Analogy must sometimes replace definition [Aristotle]
4636 All matters of fact are deduced by analogy [Hume]
6961 Any difference can undermine an analogy [Hume]
5555 Examples distort our grasp of rules [Kant]
5331 You have a hidden birth-mark, because I have [Ayer]
6574 Legal reasoning is analogical [Fogelin]
7465 Babylonians mainly thought by analogy [Watson]
16307 Analogies are heuristics, not to be trusted [Halbach]

4. Open Question

definitions failing by not resolving the problem
3894 Clearly 'good' might be definable [Scruton]

5. Reductio ad Absurdum

refuting by reducing to absurdity
3678 Proof by showing absurdity of denial [Friend]

6. Conclusive Proof

securely establishing a result by precise defined steps
8623 Proof reveals the interdependence of truths [Euclid]
1885 Proof goes from agreement to the non-evident [Sext.Empiricus]
8627 Are all truths provable? [Leibniz]
17495 Proof shows interdependence of truths [Frege]
16878 Proofs need clear premises and laws [Frege]
2898 Things that need proof have little value [Nietzsche]
19067 Good proof needs truth at each step [Dummett]
17773 Proofs show why a thing is true [Mayberry]

7. Thought Experiments

imagining a situation to explore the principles involved
1733 Thinking is imagination and supposition [Aristotle]
5515 Imaginary cases reveal our beliefs [Parfit]
4735 Reductionism is essential to thought [O'Grady]
15164 Most necessities rest on our imagination [Sidelle]
20183 Thought experiments are just observations [Cappelen]

F. Fallacies

1. Fallacy

distinctive types of recurrent error in human reasoning
19463 Induction assumes uniformity in nature [Ayer]
21697 Struthionic Fallacy: burying head in sand [Quine]
12223 More obscure explains the obscure? [Hale/Wright]
14603 Reification confuses objects with concepts [Schaffer,J]
11071 If-P-then-Q, Q, so P?? [Hanna]
11070 If-P-then-Q, ¬P, so ¬Q?? [Hanna]
11088 At least fourteen informal fallacies.. [Hanna]
4686 Fallacies are errors in reasoning [PG]

2. Infinite Regress

hopeless explanations which go on forever
574 Proving everything means an infinite regress [Aristotle]
14148 Regresses come from circular definitions [Russell]
6064 Only explanations are vicious regresses [McGinn]

3. Question Begging

taking for granted the very thing you are trying to prove
17242 'Petitio principii' is circular definition [Hobbes]
7415 Don't assume what is being challenged [PG]

4. Circularity

line of reasoning which just leads back to its start
3612 God guarantees our sense of truth [Descartes]
2290 I perceive God, who validates perception [Descartes]
3641 Truth can't rest on the truth that God exists [Arnauld]
4524 For Christians God must guarantee the senses [Nietzsche]
3659 God truly exists, and is the source of truth [Descartes]
9355 Circularity of premisses, or of rules [Braithwaite]
9161 Maybe we need circular justifications [Field,H]
11059 Circular arguments are formally valid [Hanna]

5. Fallacy of Composition

attributing the properties of members to the set as a whole
2653 If parts follow natural law, so must the whole [Cicero]
6219 Don't assume the whole is like the parts [Mautner]
7933 Things needn't have their parts' properties [Macdonald,C]
11089 Composition is a mereology fallacy [Hanna]

6. Fallacy of Division

attributing to whole set's properties to one of its members
7414 Truth about a set is true about its members [PG]

7. Ad Hominem

attacking an opponent's motives instead of their arguments
12573 Face the consequences of your view [Locke]
15842 Good Ad Hominems use their assumptions [Harte,V]
14231 Apply semantic theories to their originators [Liggins]
6696 Ad Hominem attacks the man, not the argument [PG]

8. Category Mistake

attributing property or class to an inappropriate type of thing
a. Category mistakes

11034 Differentiae of differents are different [Aristotle]
12491 Don't ask if sleep is fast, or virtue square [Locke]
8632 We can't apply external properties to ideas [Frege]
18002 Proposition variables have a range [Russell]
21561 'The number one is bald' is meaningless [Russell]
8468 Bizarre sentences are meaningless, not false [Russell]
6437 'Socrates and killing are two' is illegitimate [Russell]
18706 Substitution tests what kind of word [Wittgenstein]

18004 Philosophy must employ categories [Ryle]
17998 Are mistakes syntactic, semantic or pragmatic? [Magidor]
18019 People dream category mistakes [Magidor]

b. Category mistake as syntactic

18719 'Sound is red' is nonsense, not falsehood [Wittgenstein]
18735 Talking nonsense is not following the rules [Wittgenstein]
18011 All languages have category mistakes [Magidor]
18012 Category mistakes as syntactic is too complex [Magidor]
18013 Embedding shows mistakes aren't syntactic [Magidor]

c. Category mistake as semantic

18009 Mistakes are well-formed but meaningless [Chomsky]
18015 Compositionality, so meaningful mistakes [Magidor]
18016 Good p and q; ridiculous 'p and q'? [Magidor]
18017 Synonymous mistakes imply meaning [Magidor]
18021 Metaphors are meaningful category mistakes [Magidor]
18031 Category mistakes meaningless as unimaginable? [Magidor]
18030 Meaninglessness explains category mistakes [Magidor]
18034 Category mistakes play no role in mental life [Magidor]
18032 Category mistakes are unverifiable so empty? [Magidor]
18037 Can 'green' not apply to 'two'? [Magidor]
18039 Mistakes as meaningful but truth-valueless? [Magidor]

d. Category mistake as pragmatic

18041 Category mistakes are presupposition failures [Magidor]
18056 Mistakes still have a truth-value [Magidor]
18055 Presuppositions produce category mistakes [Magidor]
18057 Mistakes fine if presupposition expressed? [Magidor]
18058 Are the mistake presuppositions abilities? [Magidor]

e. Category mistake as ontological

18059 Mistake presuppositions don't show ontology [Magidor]

3. Truth

A. Truth Problems

1. Truth

whether truth exists, and what it is in general

10913 Truth concerns combination/separation [Aristotle]
10914 Thinking builds on atomic truths [Aristotle]
10916 Truth intuitively being, or assembles [Aristotle]
5728 Truth originated in the senses [Lucretius]
2673 There cannot be more than one truth [Cicero]
4748 Anselm said truth is God [Anselm]
20621 Lying has four aspects [Aquinas]
21864 Truth is its own standard [Spinoza]
12910 Predicates in subjects, in a truth [Leibniz]
8098 Truth is attaining God's view of things [Joubert]
5420 Truth is an externally dependent property [Russell]
21953 'True' can mean authentic [Heidegger]
15471 Truth relates bearers to truthmakers [Martin,CB]
6276 Warranted assertibility does not fix truth [Putnam]
4714 Epistemic truth allows ontological relativism [Putnam]
10837 Truth is an aim [Dummett]
6396 Truth depends on both meaning and belief [Davidson]
8820 Rules of reason precede the concept of truth [Pollock]
6334 There are five basic problems with truth [Horwich]
3883 No two truths can be contradictory [Scruton]
4701 Weak or strong alethic relativism [O'Grady]
4703 Truth is implied by our best theory of reality [O'Grady]
13252 Some truths have true negations [Beall/Restall]
15323 Truth is a property [Horsten]
15324 Semantic or axiomatic/syntactic truth theories [Horsten]
19333 Truths are if predicate is in the subject [Perkins]
16330 Gluts have two values, gaps are partial truth [Halbach]
16339 Truth isn't logical; it has an ontology [Halbach]
18819 Our truth concept presupposes realism [Rumfitt]

2. Defining Truth

question of whether truth can be defined, and how

8821 Pilate: What is truth? [John]
4736 Truth is too clear to be further defined [Descartes]
19070 Simple truth is conscious correctness [Hegel]
21793 Truth is highest conflict resolution [Hegel]
22092 Truth is authenticity, fidelity and honesty [Kierkegaard]
19466 'True' is a unique indefinable word [Frege]
6710 Truth refers to functional possibilities [James]
16295 Truth can't be defined from within [Tarski]
15342 All proper languages have a liar paradox [Tarski]

19069 'True sentence' seems to be undefinable [Tarski]
10153 Truth: undefinable, inconsistent, illogical [Tarski]
19178 Aim to define the old notion of truth [Tarski]
19177 Define truth extensionally and formally [Tarski]
19186 Only exact languages have precise truth [Tarski]
19194 Split 'true' into several new terms? [Tarski]
18731 Truth isn't a concept, so lacks a theory [Wittgenstein]
10840 We specify truth like winning moves [Dummett]
19160 A theory of truth includes one of predication [Davidson]
18542 A true definition of truth presupposes truth [Scruton]
18365 The identity theory reduces to absurdity [David]
18486 Define truth by means of truth-making? [MacBride]
15374 The behaviour of truth, not its 'nature' [Horsten]
15647 Truth definitions give poor theories [Halbach]
16293 Truth definitions just increase obscurity [Halbach]
16324 A definition of truth requires a metalanguage [Halbach]
16301 A definition would give truth credibility [Halbach]
19125 If we define truth, we can eliminate it [Halbach/Leigh]

3. Value of Truth

why anyone might desire truth

251 Truth is the supreme good [Plato]
21356 We should honour truth above our friends [Aristotle]
20849 Falsehoods make minds passionate and unstable [Stoic school]
1852 Good is a truth, and truth is a good [Aquinas]
6258 The mark and product of truth is virtue [Montaigne]
8018 Spinoza lived out the love of truth [MacIntyre]
12549 Nothing more beautiful than truth [Locke]
19574 Abandoning truth is self-sacrifice [Novalis]
21795 My truths must become part of me [Hegel]
19443 Truth is what unites people [Feuerbach]
15999 We can only strive for truth, not know it [Kierkegaard]
14853 Boring truths are the ones short of champions [Nietzsche]
20380 Let truth be powerful, not omnipotent [Nietzsche]
11090 The value of truth is also a problem [Nietzsche]
20357 Morality values truth; truth destroys morality [Nietzsche]
2914 Never ask whether truth is useful [Nietzsche]
19151 Truth is an intersubjective standard [Davidson]
21032 Speak truth to those who deserve it [Sandel]
21033 Careful evasions show respect for truth [Sandel]
14992 Valuable truth is joint-carving [Sider]

4. Uses of Truth

how 'truth' is used in thought and enquiry

20235 Safety drives us to seek truth [Nietzsche]
4534 'Truth' is the will to master sensations [Nietzsche]
20320 Truth unites a people [Jaspers]
15044 Truth is procedures of social control [Foucault]
6088 Truth implies facts from propositions [McGinn]
10825 Truth is needed if we are to share opinions [Field,H]
18534 Truth relates truthbearers to truthmakers [Heil]
11235 Words are 'true', but 'true of' things [Politis]

5. Truth Bearers

sorts of items capable of truth and falsehood

20823 Bearers are signified, signifier or meaning [Stoic school]
6021 Only assertions are true or false [Sext.Empiricus]
12522 Propositions are true or false [Locke]
12523 Is 'man' true and 'centaur' false? [Locke]
12558 Mental or verbal propositions are true [Locke]
19389 Truth is a feature of possible thoughts [Leibniz]
19388 Must T and F attach to actual thoughts? [Leibniz]
5644 Are concepts true or false? [Hegel]
8187 Frege attached truth to propositions [Frege]
14102 Non-mental propositions bear truth [Russell]
5419 Truth is a property of beliefs and statements [Russell]
5784 Truth is a property of propositions [Russell]
6442 Truth belongs primarily to beliefs [Russell]
17652 Without statements truth is irrelevant [Goodman]
3745 Statements are true, not sentences? [O'Connor]
8188 Truth attaches to individual sentences [Davidson]
13941 Seven possible truth-bearers [Cartwright,R]
13942 Logic favours the rigour if sentences [Cartwright,R]
10845 True sentences must express propositions [Lewis]
2435 Thought is essentially truth-preserving [Fodor]
18369 14 candidates for truthbearers... [Kirkham]
18996 'Partial truth' is having wholly true parts [Yablo]
21616 Truth applies equally to suppositions [Williamson]

4737 Propositions, beliefs or utterances for truth? [Engel]
15348 Propositions and sentences are similar [Horsten]

6. Verisimilitude

process of getting closer to the truth

575 If error has degrees then so does truth [Aristotle]
19247 Blocking further truth is unpardonable [Peirce]
3861 Implications of theory won't prove probability [Newton-Smith]
3869 Verisimilitude increases predictive power [Newton-Smith]
9651 Versimilitude is close to the true world [Lewis]
15557 Verisimilitude seems to defy analysis [Lewis]
17602 Versimilitude is broadening and deepening [Thagard]

7. Falsehood

how to understand failures to be true

19072 Deep untruth is being false to its nature [Hegel]
18305 Truth-lovers know how to lie [Nietzsche]
4548 Only because there is thought is there untruth [Nietzsche]
5417 Falsehood must be possible in truth theories [Russell]
16477 Asserting not-p is saying p is false [Russell]
21623 F is more complex than T [Williamson]

8. Subjective Truth

no truth, apart from the way individuals see things

14040 Observation and applied thought are true [Epicurus]
3610 Truth is clear and distinct conception (hard) [Descartes]
2266 Truth is clear and distinct perception [Descartes]
4301 Wrong things can seem clear and distinct [Leibniz]
5641 The intrinsic mark of truth is 'adequacy' [Spinoza]
5022 Truth is unobjectionable and followed [Leibniz]
13157 Truth is what is most intelligible [Leibniz]
16005 My own truth matters more than knowledge [Kierkegaard]
22094 Subjective truth has to be repeated [Kierkegaard]
5651 A theory of truth requires a subject [Kierkegaard]
20313 Truth can only be an inward passion [Kierkegaard]
5652 True beliefs augment one's power [Nietzsche]
19144 'Epistemic' truth rests on knowability [Davidson]
8705 Truth is our servant, and is restricted [Friend]

9. Rejecting Truth

denial of either meaning or content to the concept of truth

21248 Denying truth's existence is contradictory! [Aquinas]
4508 The truth is just economy of effort [Nietzsche]
18986 Truth is just verification-processes [James]
15569 Truth is historical and nonabsolute [Heidegger]
19636 Truth is error not properly experienced [Cioran]
19642 Each 'truth' is guaranteed by the police [Cioran]
15042 Truth arises from social constraints [Foucault]
4756 Truth-talk is just metaphor [Derrida]
21877 Truth is buried in the unconscious [Derrida]
4726 Truth is defending your view successfully [Rorty]
10820 Is truth compatible with science? [Field,H]

B. Truthmakers

1. For Truthmakers

supporting the idea that all truths have truthmakers

15775 The fact is what makes the truth [Aristotle]
5777 Truth of beliefs depends on facts [Russell]
18487 But what makes sentences true? [McFetridge]
18531 Truthmaking used to be presupposed [Heil]
18344 Truth must track existence [Bigelow]
18484 Phenomenalist,behaviourist,presentist truths? [MacBride]
18335 Truth-makers solve five problems? [Rami]
18334 Truth-maker is explanatory, or intuitive [Rami]

2. Truthmaker Relation

how truths relate to their truthmakers

10910 Truth-making is isomorphism [Wittgenstein]
10847 Truthmakers are about existential grounding [Lewis]
10911 Truthmakers relate by part-whole [Mulligan/Simons/Smith]
18470 Treat truthmaking as primitive, with axioms [Smith,B]
18351 Truthmakers should explain their truths [Lowe]
18362 Truthmaking is non-symmetric, not asymmetric [David]
14415 A ground must actually be about its truth [Merricks]
18466 Entailment makes everything necessity-makers [MacBride]
18877 Moral realism doesn't entail any 'things' [Cameron]
17325 Truth-maker hates non-causal dependence [Liggins]
18339 Truth-making as 1-1, or many-many? [Rami]

3. Truthmaker Maximalism

there cannot be a truth which doesn't have a truthmaker

17282 Not all truths need existence support [Fine,K]
18509 Logic and maths don't have truthmakers [Heil]
18473 Maximalism: every truth has a truthmaker [MacBride]
18481 Optimalism tracks Wittgenstein logical atomism [MacBride]
18868 How can Truthmaker not be maximal? [Cameron]
18928 Necessary Maximalism produces contradiction? [Cameron]
17962 Every truth has a sufficient truth-maker [Forrest]
18333 Truthmaker: truths (possibly all) have makers [Rami]
18866 Maybe only 'positive' truths need truth-makers [Tallant]

4. Truthmaker Necessitarianism

makers that ground truths also force them to be true

18467 Portions of reality don't 'entail' truths [Armstrong]
18468 Primitive necessitating makes truths [Armstrong]
7005 Things only enter an account if entailed [Jackson]
18469 Necessitation isn't just for truth-making [Smith,B]
7004 Truth-making as entailment is false [Heil]
18360 Propositions with truth-makers must be true [David]
18867 Truthmakers necessitate every truth [Cameron]
18873 What exists fixes all the truths [Cameron]
15395 Truthmaking from natures, not necessity? [Cameron]
18931 Determinate truths don't need extra making [Cameron]
18342 All truth-makers necessitate their truths? [Rami]

5. What Makes Truths

aspect of reality that determines what is true

a. What makes truths

10915 Truth depends on how things are [Aristotle]
6090 Facts cause truth, expressed in sentences [Russell]
18901 Truthmakers are facts 'of the world' [Sommers]
10365 'Facta' are truth-makers for facts [Mellor]
15546 Predication truths are how, not what [Lewis]
10906 Dependent objects are the truth-makers [Mulligan/Simons/Smith]
10907 Truthmaker to sentence isn't 1-to-1 [Mulligan/Simons/Smith]
10909 Sentences don't designate truth-makers [Mulligan/Simons/Smith]
10912 Truthmakers are experience, not logic [Mulligan/Simons/Smith]
15063 Worldly and non-worldly truthmakers [Fine,K]
18358 Two truths can match the same fact [David]
14408 It may be unclear what a truth is 'about' [Merricks]
18483 Subject matter is the key idea of truthmaking [MacBride]
18879 Propositions needn't state their truthmakers [Cameron]
18880 Truthmaking as existence has several rivals [Cameron]
18874 The truthmakers may be unreal [Cameron]
18932 Truthmaking itself can't be made true! [Cameron]
18340 There are different kinds of truth-maker [Rami]
18915 Truthmaker facts are not in the world [Engelbreisen]
18919 There are no 'falsifying' facts [Engelbreisen]
18860 Truthmakers should be as small as possible [Tallant]

b. Objects make truths

18367 Existence cause truths to be true [Aristotle]
15134 Truthmakers require a named entity [Williamson]
18355 The making matters, not the makers [David]
15012 Truthmaker gives poor explanations [Sider]
14395 A change in property needs a single truthmaker [Merricks]
14398 Can destruction create a truthmaker? [Merricks]
14403 Truthmaker rests on de re modality [Merricks]
13247 Truthmakers entail sentences [Beall/Restall]

c. States of affairs make truths

13881 Grasp the truths, not the objects [Frege]
14397 Truthmaker theory demands too much [Merricks]
15394 Truthmaker needs tropes or states of affairs [Cameron]
18341 Truthmakers: states, individuals, properties? [Rami]

d. Being makes truths

6994 Truth supervenes on being [Jackson]
15548 Truth is supervenient on being [Lewis]
14025 Weak Truthmaker: truth supervenes on being [Crisp,TM]
14396 Identical stuff means identical truths [Merricks]
14400 Supervenience won't explain truth's dependence [Merricks]
18345 Supervenient truth handles negative truths [Rami]
18346 Truth-on-being is nec but not sufficient [Rami]

6. Making Negative Truths

how negative truths can have truthmakers

21544 A false proposition is an existence failure [Russell]
15547 Totality facts make negative existentials true [Armstrong]

18377 Negative truthmakers are relevant states [Armstrong]
18382 Arctic animals make penguins' absence true [Armstrong]
15549 Nothing exists - what's the truthmaker? [Lewis]
9139 What is truthmaker for 'nothing exists'? [Sorensen]
14394 Are non-existence claims about what exists? [Merricks]
18477 Too many negative truths for truthmaking? [MacBride]
18479 Negative truths have varied truthmakers [MacBride]
18869 Can negative truths be ungrounded? [Cameron]

7. Making Modal Truths

how truths of necessity and possibility are made true

18384 One truthmaker for contingents and opposites? [Armstrong]
18386 Truthmaker for possible non-existence? [Armstrong]
18387 Possible unicorn truthmakers are combinations [Armstrong]
18394 Maths truthmakers are possible structures [Armstrong]
17283 Are necessary truths grounded by anything? [Fine,K]
10749 One truth-maker for all necessary truths? [Oliver]
15140 Can contingent truths have truthmakers? [Williamson]
15141 Truthmaker must avoid varying domains [Williamson]
18343 Truth-makers cover entailments too? [Rami]
18826 True at a possibility:necessarily so if actual [Rumfitt]

8. Making General Truths

how general truths are made true

18348 Makers for atomic, general and negative [Russell]
18381 General truthmakers needs limits [Armstrong]
18482 Negatives and universals are true by default? [MacBride]

9. Making Past Truths

how truths about the past can be made true now

14399 What supports tensed truths for presentists? [Lewis]
14023 Truthmaker means trouble for presentists [Crisp,TM]
18923 'Having been F' is not intrinsic to things [Cameron]
18926 Temporal distribution properties fix the past [Cameron]
18929 Truthmakers for the past must endure! [Cameron]
13991 Presentism denies propositions re nonexistents [Markosian]

10. Making Future Truths

how truths about the future can be made true now

1703 Options are necessary, not actual events [Aristotle]
21388 Current causes make future events true [Chrysippus]
21390 Future truths are those affirmed in the future [Carneades]
21672 Future things are true that will be actual [Carneades]
15186 Tenseless time accepts future truths [Le Poidevin]

11. Truthmaking and Correspondence

relation of truth-making to the correspondence theory of truth

18349 Only atomics correspond to truth-makers [Wittgenstein]
10846 Truthmaker is not 1-1 correspondence [Lewis]
18354 Correspondence, unlike making, is symmetric [David]
18356 Correspondence is a bad account of truthmaking [David]
18363 Facts are the only truth-makers? [David]
14390 Truthmaker isn't a theory, like correspondence [Merricks]
18696 Truthmaking makes life easy for anti-realists [Button]
18870 Truthmaking and correspondence stand together? [Cameron]
18871 Truthmaking is right, so corrsponce is good [Cameron]
18338 Truthmaker internal: correspondence external [Rami]
12463 Truthmaking can be many-to-many [Jacobs]

12. Rejecting Truthmakers

opposing the claim that all truths have truthmakers

19044 Nothing makes sentences true [Davidson]
10750 Slingshot proves just one truth-maker [Oliver]
9140 Truthmaker of buyonegetonefree? [Sorensen]
14024 Three problems for the Truthmaker thesis [Crisp,TM]
14412 Truthmakers about non-existent things? [Merricks]
14414 I make true propositions not about me [Merricks]
12442 Fictions have truths without truthmakers [Azzouni]
18474 'This has no truthmaker' have no truthmaker? [MacBride]
18485 Idealists have mind-dependent truthmakers? [MacBride]
18490 'Makes true' is just formal, and not a verb? [MacBride]
18493 Truthmakers assume objectual quantification [MacBride]
17318 Makers for existence, synthetic, or everything [Liggins]
14480 Maybe analytic truths don't need truthmakers [Thomasson]
18863 Truthmakers for possible new powers? [Tallant]
19079 Idealists blur truths with truthmakers [Young,JO]

C. Correspondence Truth

1. Correspondence Truth

truth is a successful match between mental states and reality

13776 Truth says of what is that it is [Plato]
35 Truth is conformity to evidence [Aristotle]
1704 How things are makes statements true [Aristotle]
586 Truth is asserting what is the case [Aristotle]
19165 Aristotle's truth is of parts of sentences [Aristotle]
22104 Truth is the conformity of being to intellect [Aquinas]
9107 Truth is when subject and predicate agree [William of Ockham]
4816 True ideas correspond with objects [Spinoza]
13000 Truth is proposition and content corresponding [Leibniz]
5539 Truth is agreement of cognition and objects [Kant]
19071 Deep truth is being what it ought to be [Hegel]
6343 Russell's propositions and facts are identical [Horwich]
7395 Congruence fails for existential truths [Joslin]
5428 Beliefs are true if the facts correspond [Russell]
5783 Unusual propositions complicate truth [Russell]
10967 Picture theory is best correspondence theory [Read]
7087 Language structure matches real structure [Wittgenstein]
4702 'Tractatus' has correspondance truth [Wittgenstein]
7056 Pictures touch and correlate with reality [Wittgenstein]
18707 All thought has the logical form of reality [Wittgenstein]
21750 Observations imply truth as correspondence [Quine]
10835 Say right thing on right occasion [Austin, JL]
4742 Correspondence as many-one or one-many? [Armstrong]
6266 Language and science need correspondence [Putnam]
7617 Correspondence was the norm before Kant [Putnam]
3742 Words must also correspond to beliefs [O'Connor]
18702 Parts of language really refer to things [Davidson]
3508 All enquiry MUST aim at correspondence [Searle]
4901 Despite criticism, truth is correspondence [Perry]
6342 Correspondence uses facts, or reference [Horwich]
18364 Correspondence theory likes ideal languages [David]
10354 Correspondence needn't be with external facts [Kusch]
18337 Correspondence is a representation relation [Rami]

2. Correspondence to Facts

how things are, independently of thought

20780 Graspable presentations are criteria of facts [Chrysippus]
13985 True of the facts, but false of what? [Ryle]
10842 Facts are not in the world [Strawson,P]
10843 Facts are what truths express [Strawson,P]
10355 Truth comes before facts [Brandom]
13469 Tarski eliminates 'facts' from truth [Hart,WD]
8315 Are facts just true propositions? [Lowe]
18359 One proposition can match many facts [David]
18357 Truth doesn't correspond for disjunctions [David]
4750 'It is a fact that p' just means 'p' [Engel]
15333 Correspond to facts, not to true propositions [Horsten]
17740 Examine correspondence of parts [Jenkins]

3. Correspondence Truth critique

criticism of the correspondence theory of truth

20793 How to show presentations resemble objects? [Sext.Empericus]
19465 Perfect correspondence is impossible [Frege]
18983 Many ideas can't 'agree' with their objects [James]
16296 Precise correspondence theory is impossible [Tarski]
13984 Maps correspond to other maps! [Ryle]
10836 A country can have many good maps [Austin, JL]
6277 Concepts and reality can't correspond [Putnam]
4716 There is no single correspondence for truth [Putnam]
18902 What do truths correspond to? [Davidson]
19148 Nothing interesting corresponds to truths [Davidson]
19167 Different sentences may correspond the same [Davidson]
19166 Equivalent sentences correspond the same? [Davidson]
2572 Logical truth can't be by correspondence [Haack]
10908 Correspondence has to invent 'facts' [Mulligan/Simons/Smith]
2768 Conflicting propositions can fit the facts [Dancy, J]
6332 There is no satisfactory correspondence theory [Horwich]
3593 To specify the fact we assert the sentence [Williams, M]
2959 Do modes of description affect facts? [Lockwood]
6084 Negation of fact corresponds to fact [McGinn]
6085 Truth is built into 'correspondence' [McGinn]
8319 One-to-one correspondence needs countables [Lowe]
9594 Do analytic truths correspond to facts? [Williamson]

4744 Correspondence tends to be circular [Engel]
14391 Necessary truths correspond to something? [Merricks]
14418 Truth is monadic and primitive, not a relation [Merricks]
15337 Correspondence to facts is too vague [Horsten]

D. Coherence Truth

1. Coherence Truth

truth is when propositions effectively fit together

4298 All knowledge is inferentially connected [Descartes]
2115 An omniscient being could predict everything [Leibniz]
7077 The true is the whole [Hegel]
4538 Judgements are only sure when interconnected [Nietzsche]
18972 Truth is co-ordination of experiences [James]
18973 Good fits with your beliefs count as 'true' [James]
5421 Truth is coherence with our body of beliefs [Russell]
19080 A coherence test refutes correspondence [Blanshard]
19081 Coherence suggests good correspondence [Davidson]
19150 Coherence truth ties the idea to beliefs [Davidson]
2765 Mutual logical redundancy threatens coherence [Dancy,J]
2769 Rival theories always seem incoherent [Dancy,J]
3584 Coherence is about justification, not truth [Williams,M]
3585 Coherence must involve positive links [Williams,M]
14713 Truth is apriori incoherence of the negation [Chalmers]
4738 Truth is relationships of truth-bearers [Engel]
18701 Truth is thought coherence, not about objects [Button]
19077 P and Q consistent with the set, yet clash? [Young,JO]
19076 Coherentists dispute the proposition set [Young,JO]
19078 Modest, medium or huge coherence set? [Young,JO]
19084 Coherence must be with an actual belief set [Young,JO]

2. Coherence Truth Critique

criticism of the coherence theory of truth

5423 Without contradictions everything is coherent [Russell]
5424 Coherence is a test for truth, not its meaning [Russell]
5422 Many coherent belief-sets seem possible [Russell]
2766 There are many coherent sets of propositions [Dancy,J]
6083 A coherence theory of truth implies idealism [McGinn]
4745 Increase coherence by adding falsehoods [Engel]
15334 Coherence allows contradictory wholes [Horsten]
19083 Which set for coherence? One-off truths? [Young,JO]

E. Pragmatic Truth

1. Pragmatic Truth

truth as the aim of enquiry

19571 Delusion and truth differ in life functions [Novalis]
7661 Truth is ultimate consensus of investigation [Peirce]
19095 'Truth' is the many aims of enquiry [Peirce]
19097 True beliefs are not the useful ones! [Peirce]
21494 Maybe enquiry is unending? [Atkin]
19246 'Holding for true' is practical, or provisional [Peirce]
15335 Peirce offers anti-realist verificationism [Horsten]
14796 Truth is the end result of sufficient enquiry [Peirce]
18984 Truth is what we can corroborate [James]
8828 Truth is rational acceptability [Putnam]
7616 Truth is the ideal of rational acceptability [Putnam]
2549 Truth is best belief not good representation [Rorty]
3884 Pragmatism proposes to drop 'truth' [Scruton]
6627 Radical pragmatists abandon truth [Stich]
15336 The pragmatic theory of truth is relative [Horsten]
19086 Pragmatic meaning: pro- or anti-truth? [Macbeth]
19094 Truth is enduring assertibility [Misak]
19099 'True' has a wide diversity of uses [Misak]
19100 Truth makes disagreements matter [Misak]
19103 'True' implies sustained evidence [Misak]
19105 Truth is our aim, not a property [Misak]
19108 Proper assertion is truth, in contexts [Misak]

F. Semantic Truth

1. Tarski's Truth

Tarski's definition of truth for use in logical models

a. Tarski's truth definition

21752 Before Gödel truth was provability [Gödel]
15339 Skip essence of truth; how does it function? [Tarski]
16302 Tarski gave a criterion for truth definitions [Tarski]
19135 Enumerating truths is too restrictive [Davidson]
19138 Define 'true' by giving its extension [Davidson]
4699 Tarski made truth relative, to a language [Tarski]

19324 Tarski skips how sentences relate to states [Kirkham]
10672 Truth is sequence-satisfaction [Tarski]
13338 We give a schema to partially define truth [Tarski]
19180 Sentence truth needs a specific language [Tarski]
19181 Classical truth: 's is w' is true if s is w [Tarski]
19183 Truth is a conjunction of partial definitions [Tarski]
19182 'True' means all T-sentences can be asserted [Tarski]
19196 Scheme (T) doesn't define truth [Tarski]
19198 Asserting 'snow is white' implies its true [Tarski]
10844 Truths and facts are a perfect fit [Strawson,P]
18951 Precise 'true-in-L' uses set theory [Putnam]
2570 Truth is relative to a sentence's language [Haack]
13499 Tarski reduced truth to reference [Field,H]
10818 Tarski's truth employs other semantics [Field,H]
14965 We have Truth Introduction and Elimination [Gupta]
10353 Relations of set members shows truth [Kusch]
15340 Assert phi? Then assert phi-is-true! and v.v. [Horsten]
15354 The hierarchy is nonuniform, and contingent [Horsten]
19101 Disquotation is bivalent [Misak]
19096 Disquotationalism's like a telephone directory [Misak]
19106 Disquotation links truth and assertion [Misak]

b. Satisfaction and truth

14454 'Satisfying' a function is making it true [Russell]
15410 Truth for closed, from satisfaction of open [Burgess]
18811 Satisfying is true assignment to functions [Tarski]
15365 Use satisfaction ('true of') to define truth [Tarski]
19314 To express truth as physical, use satisfaction [Tarski]
19316 Use a compositional property for truth [Tarski]
19175 Satisfaction axioms, then definition, then truth [Tarski]
19184 Truth defining needs semantics (satisfaction) [Tarski]
19191 True sentences are satisfied by all objects [Tarski]
19146 Can we define truth in terms of reference? [Davidson]
19145 Define truth by satisfaction, or vice versa? [Davidson]
19174 All sequences satisfy bound variables in truth [Davidson]
10817 Tarski reduced truth to another undefinable [Field,H]
19318 A 'sequence' is an ordered set [Kirkham]
19319 If one sequence satisfies, they all do [Kirkham]
13504 Sentences satisfied by all sequences or none [Hart,WD]
13634 Satisfaction gives a model of truth [Shapiro]
19128 Shortage of names means using 'satisfaction' [Halbach/Leigh]

c. Meta-language for truth

19188 One semantically closed language won't do [Tarski]
19189 The metalanguage is large, and defined [Tarski]
19323 'P' true iff p; meaning for P, world for p [Etchemendy]
15345 Semantic theories encounter a regress [Horsten]
15649 Semantic: object predicate, meta- definition [Halbach]
16297 Semantic definition can evade Tarski's Theorem [Halbach]
19120 Semantic truth needs metalanguage power [Halbach/Leigh]

2. Semantic Truth

significance of formal definitions of linguistic truth

19134 Tarski's truth is for one language, not all [Davidson]
16303 Tarski proved that truth is definable [Tarski]
16304 Adequate theories must prove non-contradiction [Halbach]
10969 Tarski has a theory and a meta-theory [Tarski]
17746 'Truth' relates syntax to semantics [Tarski]
10904 Tarski truth ignores the atomics [Mulligan/Simons/Smith]
2571 The semantic theory of truth is neutral [Tarski]
10821 Explain semantics nonsemantically [Tarski]
10822 Add primitive reference to Tarski's theory [Field,H]
10824 If reduction is a list we can validate witches [Field,H]
9012 'Truth' of sentences reminds us of reality [Quine]
10841 'True' refers to possible statements [Strawson,P]
6264 Understanding 'true' is knowing the language [Putnam]
6265 There is more to 'true' than its logic [Putnam]
6269 The only definition of 'true' is Tarski's [Putnam]
2345 Meaning can't be kept out of truth definitions [Putnam]
19171 Tarski has rules for truth, but not its point [Dummett]
8166 Truth is part of semantics [Dummett]
3744 Semantic theory needs sentences for truth [O'Connor]
3749 What does 'true in English' mean? [O'Connor]
19136 Tarski failed to connect truth to meaning [Davidson]
19139 What do Tarski's truths have in common? [Davidson]
19147 Tarski shows truth is the basic concept [Davidson]
19172 Defining true sentences stipulates a language [Davidson]
15327 His semantic theory inspires axiomatic ones [Kripke]

15343 Kripke offers a semantic theory of truth [Kripke]
10017 Truth 'in a model' is easier to handle [Hodes]
10018 Set theory truth is formal, or interpreted [Hodes]
19320 Satisfaction needs finite predicate supply [Kirkham]
14968 Weakened languages can contain truth [Gupta]
13503 Infinite T-sentences can't define truth [Hart,WD]
10170 True-in-all-models seems non-relative [Reck/Price]
19205 'S is w' only contingently says S is w [Merricks]
16337 Disquotational truth theories lack power [Halbach]
19127 T-sentences are weak and non-conservative [Halbach/Leigh]

G. Axiomatic Truth

1. Axiomatic Truth

theories of truth built from a set of axioms

16300 Ockham had an axiomatic account of truth [William of Ockham]
15716 Non-contradictory axioms mean truth [Hilbert]
15322 Tarski started axiomatic truth [Tarski]
16306 We can axiomatise Tarski's definition [Tarski]
19141 Truth axioms contingent and inconsistent? [Tarski]
19190 A meta-language needs axiomatised 'true' [Tarski]
14967 3-valued languages can contain truth [Kripke]
14966 Truth may not need a metalanguage [Kripke]
19137 Add primitive 'true' to the object language? [Etchemendy]
15332 'Reflexive' theories allow truth-iterations [Horsten]
15346 Axiomatic truth avoids the regress problem [Horsten]
15350 The Naïve Theory of Truth is inconsistent [Horsten]
15351 Axiomatic: primitive truth plus laws as axioms [Horsten]
15361 A good truth theory must be compositional [Horsten]
15367 Truth increases the power of arithmetic! [Horsten]
15371 Axiom theory that is strong, natural and sound [Horsten]
15373 Truth axioms outstrip definitions and models [Horsten]
15650 Axiomatic theories need a weak framework [Halbach]
15648 Make truth primitive, ruled by axioms [Halbach]
15655 Is axiomatic truth conservative about proofs? [Halbach]
15654 Axiomatic truth has certain commitments [Halbach]
16294 Axiomatic truth presupposes no definition [Halbach]
16326 Semantic truth: Kripke's, or revision [Halbach]
16299 Truth theories can use PA as a base theory [Halbach]
16340 Truth issues arise from a base theory [Halbach]
16305 Complete truth axioms are not possible [Halbach]
16311 Axiomatise Tarski needs binary 'satisfaction' [Halbach]
16313 'Conservative' theories add nothing new [Halbach]
16315 TB: PA, truth, and Tarski bi-conditionals [Halbach]
16318 CT: true sentences depend on constituents [Halbach]
16322 CT proves PA consistent, so isn't conservative [Halbach]
16314 Truth theories are 'typed' or 'type-free' [Halbach]
19124 Truth theories can establish PA soundness [Halbach/Leigh]
19126 Truth reveals nothing, so must be weak [Halbach/Leigh]

2. FS Truth Axioms

Friedman-Sheard axiomatisation of truth

15330 FS is classical, but strong [Horsten]
16327 FS is type-free CT, plus two rules [Halbach]
19129 FS is classical [Halbach/Leigh]

3. KF Truth Axioms

Kripke-Feferman axiomatisation of truth

16328 Kripke classified the various fixed points [Kripke]
15331 KF is nonclassical, but strong [Horsten]
16329 The KF theory axiomatises Kripke's theory [Halbach]
16331 KF is stronger than classical FS truth [Halbach]
16332 KF does not contain its own truth predicate [Halbach]
19130 KF's truth is non-classical, allowing gluts [Halbach/Leigh]

H. Deflationary Truth

1. Redundant Truth

truth is an unnecessary meaningless concept

14777 True judgments don't judge themselves [Peirce]
19468 'True' adds nothing to a thought's content [Frege]
14176 'C's death is true' isn't same as 'C died' [Russell]
3750 "It is true that x" means no more than x [Ramsey]
19197 Universal and unspecified claims need truth [Tarski]
11074 'It is true that P' means simply P [Wittgenstein]
9011 Just speak the single sentence; skip truth [Quine]
2347 'True' isn't redundant where indexicals occur [Putnam]
19153 Truth is too basic and clear to replace [Davidson]
6335 Redundancy cannot explain certain inferences [Horwich]
12439 Truth predicates are all replaceable [Azzouni]

21640 'It is true that' invites contrast classes [Hofweber]
14008 Redundancy muddles bivalence and ex-middle [Bourne]

2. Deflationary Truth

truth has no nature, and refers to nothing
1564 Identical words can be true or false [Anon (Diss)]
19185 Semantics is a very modest discipline [Tarski]
4749 'Truth' is just a mark of assertion [Ayer]
12129 Truth only applies within theories [Kuhn]
19170 Tarski is not a disquotationalist [Davidson]
8819 We need truth for defeasible reasoning [Pollock]
6336 Deflation can't explain that we aim at truth [Horwich]
6337 Deflationism says 'p is true' is trivial [Horwich]
6344 Truth is useful for unarticulated propositions [Horwich]
9921 'True' is just occasionally useful [Burgess/Rosen]
4753 No metatheory for deflationists [Engel]
4755 Deflationism denies reasons for beliefs [Engel]
14419 Deflationism denies the property of being true [Merricks]
12437 Truth helps with inexplicit sentences [Azzouni]
15325 No full logic, so no essence for truth? [Horsten]
15344 Just laws of truth, not models and definitions [Horsten]
15356 Deflationism doesn't handle laws of truth [Horsten]
15358 Truth isn't a topic - there are just truths [Horsten]
15359 Assert sentences, or objects with truth [Horsten]
15368 Truth is a tool for generality and inference [Horsten]
19098 Deflate correspondence, but not the rest [Misak]
19104 Deflationism give truth's role, not a theory [Misak]
18347 Deflationist truth is infinitely disjunctive [Rami]
15656 Truth just expresses infinite conjunctions [Halbach]
16338 Deflationism says truth is just for expression [Halbach]
16316 Truth is just for infinites or generalisations [Halbach]
16317 Deflationism can't prove generalisations [Halbach]
16320 Deflationism is just conservative axioms? [Halbach]
16319 CT's generalisations are better for deflation [Halbach]
19075 Deflationary theories reject truth-conditions [Young,JO]

3. Minimalist Truth

truth defined formally, without ontology
6022 'It is day' is true if it is day [Zeno of Citium]
6086 Truth implies facts from propositions [McGinn]
6087 Testimony is useless without disquotation [McGinn]
6345 Minimalism says truth is and isn't a property [Boghossian]
4751 'True' is a simple world like 'and' [Engel]
17990 Minimal truth misses current inexpressibles [Hofweber]
4687 Minimal theories of truth have slim ontology [PG]

4. Formal Logic

A. Syllogistic Logic

1. Aristotelian Logic

Aristotle's original account of formal syllogistic logic
639 Socrates developed logic based on essences [Socrates]
9405 Premiss pairs form a Square of Opposition [Aristotle]
11060 Aristotelian logic has four ingredients [Aristotle]
18909 Premises build on four connectives [Aristotle]
8080 256 possible syllogisms, 19 valid [Aristotle]
13912 Not noun-verb, but term-copula-term [Aristotle]
8071 Aristotle listed nineteen valid syllogisms [Aristotle]
18953 Aristotle was tied to pairs of classes [Putnam]
13643 Aristotelian logic is complete [Shapiro]
18913 Ancient logic had trouble with relations [Engelbretsen]
13913 Perfect syllogism: Barbara, Celarent, Darii, Ferio [Engelbretsen/Say]
13914 One rule: of whole, then of part [Engelbretsen/Sayward]

2. Syllogistic Logic

general ideas about formal arguments in syllogism form
13819 Aristotle forgot possible non-existence [Bostock]
20778 Syllogism show what is demonstrative [Stoic school]
8084 Syllogisms are useless for discovery [Locke]
12572 Good reasoning doesn't need syllogisms [Locke]
18806 Traditional categories are 'impure'? [Frege]
5401 Induction can be better than deduction [Russell]
14453 The Darapti syllogism is actually fallacious [Russell]
18949 Syllogisms are now expressed in set theory [Putnam]
15879 Sq of Opposition: contradictories, contraries [Harré]
13439 Venn Diagrams map predicates for syllogisms [Bostock]
8081 Some syllogism implications are subtle [Devlin]
19006 'Enthymemes' have unstated assumptions [Yablo]

10688 'Equivocation' is shifting the meaning [Beall/Restall]
13915 Three problem cases of syllogisms [Engelbretsen/Sayward]

3. Term Logic

Sommers's modern updating of syllogistic logic
18904 Predicables have positive/negative pairs [Sommers]
18895 Real logic is clear and variable-free [Sommers]
19053 A natural logic would only negate predicates [Dummett]
18907 Term logic: negation/denial, and tied pairs [Engelbretsen]
13916 Basics: expression letters, +, -, (,) [Engelbretsen/Sayward]

B. Propositional Logic PL

1. Propositional Logic

overview of the logical relationships between propositions
8077 Stoic logic concerns relations of propositions [Chrysippus]
8083 Boole aimed at an algebra of thought [Boole]
7727 Boole represented syllogisms and propositions [Boole]
9535 'Contradictions' always differ in truth-value [Lemmon]
8085 Propositional logic has one inference rule [Devlin]
7726 Syllogisms for concepts, rest for propositions [Weiner]
8472 Sentence logic is consistent and complete [Orenstein]
7786 Predicate logic expands propositional [Girle]
7798 Propositional logic has three axiom schemas [Girle]
17749 PL was proved consistent in 1921 [Walicki]
17765 PL shows only one statement relation [Walicki]
18803 Proposition semantics has four axioms [Rumfitt]

2. Tools of Propositional Logic

formal machinery used for proofs in PL

a. Symbols of PL

9511 right-arrow is 'if..then' [Lemmon]
9512 \neg is 'not' [Lemmon]
9508 \vdash is 'therefore' [Lemmon]
9509 upside-down ' \vee ' is 'and' [Lemmon]
9510 ' \vee ' is the symbol for 'or' [Lemmon]
9513 $P \rightarrow Q$ is 'P if and only if Q' [Lemmon]
9514 \dashv means 'interderivable' [Lemmon]
12005 'ι' forms definite descriptions [Forbes,G]
7799 Proposition logic has three defined operators [Girle]

b. Terminology of PL

9516 A wff must follow the formation rules [Lemmon]
9517 'Scope' is marked by brackets [Lemmon]
9518 'Theorems' are proved without assumptions [Lemmon]
9519 A 'substitution-instance' is wff replacement [Lemmon]
9528 A 'tautology' always comes out as T [Lemmon]
9529 An 'inconsistency' always comes out as F [Lemmon]
9530 A 'contingency' produces both T and F [Lemmon]
9532 'Subcontrary' propositions aren't both false [Lemmon]
9531 'Contrary' propositions are never both true [Lemmon]
9533 A 'implies' B is always if-A-then-B [Lemmon]
9534 'Equivalent' propositions mirror their truth [Lemmon]
9540 A 'value-assignment' sets variables as 1 or 0 [Hughes/Cresswell]
13422 'Conjunctive Normal Form': no ands in ors [Bostock]
13421 'Disjunctive Normal Form': no ors in ands [Bostock]
13689 'Theorems' are provable without premises [Sider]
13520 A 'tautology' must include connectives [Wolf,RS]

c. Derivation rules of PL

9393 We can make assumptions [Lemmon]
9394 Given A and if-A-then-B, then B [Lemmon]
9396 Given A, we may derive $\neg \neg A$ [Lemmon]
9397 If B is proved from A, then if-A-then-B [Lemmon]
9398 Given A and B, we may derive A-and-B [Lemmon]
9399 Given A-and-B, we may derive either A or B [Lemmon]
9400 From either A or B, we may derive A-or-B [Lemmon]
9401 A-or-B, if-A-then-C, if-B-then-C: so C [Lemmon]
9402 If assuming A proves B-and- $\neg B$, then $\neg A$ [Lemmon]
9395 Given $\neg B$ and if-A-then-B, then $\neg A$ [Lemmon]
13500 Antecedent-to-consequent? Conditional! [Hart,WD]
14273 CP needs a truth-functional 'If' [Edgington]
10987 Rules: Simplification, Addition, Disjunctive Syll [Read]
13524 Deduction Th: $T \cup \{P\} \vdash Q$, so $T \vdash (P \rightarrow Q)$ [Wolf,RS]

d. Basic theorems of PL

9521 MTP says $\neg P, P \rightarrow Q \vdash Q$ [Lemmon]
9522 MPT says $P, \neg(P \rightarrow Q) \vdash \neg Q$ [Lemmon]
9527 Distributive Laws switch con-/dis-junction [Lemmon]
9526 A conjunction becomes a non-conditional [Lemmon]
9525 A conditional becomes a non-conjunction [Lemmon]

9524 A conditional can become a disjunction [Lemmon]
9523 De Morgan's Laws switch conjuncts/disjuncts [Lemmon]
9541 Transposition: (if-P-then-Q) then (if- $\neg Q$ -then- $\neg P$) [Hughes/Cresswell]
13833 Thinning splits deduction from induction [Hacking]
13834 'Cut' says If A \vdash B and B \vdash C, then A \vdash C [Hacking]
13835 Logic can be constructive, without Cut [Hacking]
13350 Assumptions: formulas entail themselves [Bostock]
13351 Thinning: further premisses are harmless [Bostock]
13352 Cutting: cut out the middle stage of proof [Bostock]
13353 Negation: \neg leads to contradiction [Bostock]
13354 Conjunction: $\&$; if both are entailed [Bostock]
13355 Disjunction: \vee ; if each contradicts [Bostock]
13356 Conditional: Adding x implies y, so x implies y [Bostock]

e. Axioms of PL

2145 Maths takes certain basics for granted [Plato]
1668 Without axioms you can't get started [Aristotle]
562 Philosophy assesses the axioms of all things [Aristotle]
573 Philosophy studies the axioms of maths [Aristotle]
20791 There are five indemonstrables [Chrysippus]
5620 Philosophy studies concepts, without axioms [Kant]
9154 Mathematical axioms are self-evident [Frege]
9585 Equality itself cannot equal anything [Frege]
9542 Best-known axioms are Whitehead/Russell [Russell/Whitehead]
9013 'Or' can be defined using 'not' and 'and' [Quine]
13610 Three axioms and a rule will do [Bostock]
8086 Predicate logic retains the original axioms [Devlin]
6299 Many axioms are accepted for their results [Resnik]
8476 Axioms are true before they are selected [Orenstein]
4631 Axioms aim to evade all rational objection [Baggini /Fosl]
4632 Deduction based on axioms, or normal practice [Baggini /Fosl]
7797 Axiom system logics have three elements [Girle]

3. Truth Tables

displaying logical relations in terms of true and false

19195 Truth tables are extra-logical, not definitions [Tarski]
9537 Truth-tables are good for showing invalidity [Lemmon]
9538 Truth-tables are entirely mechanical [Lemmon]
19060 Truth tables are dubious, and may be hopeless [Dummett]
9724 The only semantics used to be truth-tables [Enderton]
9738 Each line of a truth table is a model [Fitting/Mendelsohn]
13705 Truth tables assume truth functionality [Sider]
8713 Truth-tables for connectives are realist [Friend]
17764 Connectives are sets of 0s and 1s [Walicki]

4. Soundness of PL

any formula which has a proof is a valid formula

9536 The rules get tautologies from tautologies [Lemmon]
9543 Validity is preserved, so no contradictions [Hughes/Cresswell]

5. Completeness of PL

there is a proof for every valid formula

9539 All tautologies derivable, so PL is complete [Lemmon]

C. Predicate Calculus PC

1. Predicate Calculus PC

general ideas about standard predicate logic

4971 Forget subject/predicate analysis [Frege]
17750 Predicate logic consistency in 1928 [Hilbert/Ackermann]
5737 First-order logic has a fixed language [Melia]

2. Tools of Predicate Calculus

ingredients used to construct the system of predicate logic

a. Symbols of PC

13909 $\&forall$; is 'take any'; $\&\exists$; is 'there is' [Lemmon]
13902 'Gm' for a property, 'Pmn' for a relation [Lemmon]
13911 There are six types of symbol [Lemmon]
18952 ' $Px \&\supset Qx$ ' is short for ' $\neg(Px \& \neg Qx)$ ' [Putnam]

b. Terminology of PC

13910 Variables, names, connectives, quantifiers... [Lemmon]

c. Derivations rules of PC

13907 Arbitrary objects show generalities [Euclid]
13901 Add four new rules for PC [Lemmon]
13903 Eliminate if you start with it, or vice versa [Lemmon]
13904 UE: if everything is F, this thing is F [Lemmon]
13906 $\&forall$; -Intro for infinities [Lemmon]
13908 Four Rules: UE, UI, EI, EE [Lemmon]

d. Universal quantifier $\&forall$;

17745 All A's are B's means concept A implies B [Frege]

13905 Sometimes conjunctions can replace 'for all' [Lemmon]
13522 Prove a random case and you've proved all [Wolf,RS]
13521 True for all, then true for an instance [Wolf,RS]
e. Existential quantifier &exist:
16484 Four experiences give rise to 'some' [Russell]
13900 'Some Fs are G' uses &, not &arr; [Lemmon]
13502 ∃ says object exists, not the variable [Hart,WD]
13523 If t is P, then something is P [Wolf,RS]

3. Completeness of PC

that all the valid truths of PC are provable
17751 1st order logic shown complete in 1930 [Gödel]

D. Modal Logic ML

1. Modal Logic

general ideas about the nature of modal logic
9728 Some modal sentences are 'contraries' [Aristotle]
9729 Some modal sentences are 'subcontraries' [Aristotle]
9730 Some modal sentences are 'contradictories' [Aristotle]
9731 Other modal sentences are 'contradictories' [Aristotle]
9732 Some modal sentences are subalternatives [Aristotle]
9733 Other modal sentences are subalternatives [Aristotle]
10928 Modally quantify over intensional objects? [Quine]
5745 Quantified modal logic implies absurdities [Melia]
13591 Quantified modal logic relies on essences [Quine]
16951 Structured worlds cover all modal logic [Dummett]
10163 Propositional modal logic is complete [Kripke]
10559 Kripke's semantics has presuppositions [Kripke]
16985 Possible worlds allow models for modals [Kripke]
15163 Modal logic shows necessity and essentialism [Soames]
9924 Modal logic is metalogical, not metaphysical [Burgess/Rosen]
10206 Modality is normally treated as quantifiers [Shapiro]
5744 First-order predicate calculus is extensional [Melia]
19209 SQML endorses Con Barcan, so wrong! [Merricks]

2. Tools of Modal Logic

formal machinery used in modal logic systems
a. Symbols of ML
9727 Add box (necessarily) and diamond (possibly) [Fitting/Mendelsohn]
9726 'R' is accessibility, written yRx [Fitting/Mendelsohn]
9737 The symbol |- is the 'forcing' relation [Fitting/Mendelsohn]
13136 σ_n: world accessible from σ [Fitting/Mendelsohn]

b. Terminology of ML

14684 'Accessible' to w is possible according to w [Salmon,N]
9734 xRy is x can 'access' y [Fitting/Mendelsohn]
9736 A 'model' is a frame plus truth specifications [Fitting/Mendelsohn]
9735 A 'frame' is possible worlds and accessibility [Fitting/Mendelsohn]
9741 Reflexive, transitive or symmetric relations [Fitting/Mendelsohn]
13727 We have either 'constant' or 'varying' domains [Fitting/Mendelsohn]

c. Derivation rules of ML

9740 Possibility is truth in some accesible world [Fitting/Mendelsohn]
9739 Necessity is truth in all accesible worlds [Fitting/Mendelsohn]
13140 Two tableau rules for biconditionals [Fitting/Mendelsohn]
13137 Two tableau rules for conjunctions [Fitting/Mendelsohn]
13143 Two rules for universal modality [Fitting/Mendelsohn]
13141 One rule for double negation [Fitting/Mendelsohn]
13139 Two tableau rules for implications [Fitting/Mendelsohn]
13138 Two tableau rules for disjunctions [Fitting/Mendelsohn]
13142 Two rules for existential modality [Fitting/Mendelsohn]
13148 Two rules for system 4r, reversed transitive [Fitting/Mendelsohn]
13147 Two rules for system 4, transitive [Fitting/Mendelsohn]
13146 Two rules for B, symmetrical [Fitting/Mendelsohn]
13145 Two rules for D, serial [Fitting/Mendelsohn]
13144 Two rules for T, reflexive [Fitting/Mendelsohn]
13149 Four simplified rules for S5 [Fitting/Mendelsohn]

3. Modal Logic Systems

various types of weaker or stronger modal logic
a. Systems of modal logic
16952 Relative possibility is not transitive [Dummett]
16953 Relative possibility can't be symmetrical [Dummett]
10760 Possible worlds S4-5 are sound and complete [Kripke]
16468 Non-S5 allows contingent necessities [Stalnaker]
9456 Varied accessibility shows multiple systems [Jacquette]
11004 Necessity: provable (S4) always true (S5) [Read]
b. System K
14970 K has five axioms and rules [Cresswell]
9742 K has no accessibility conditions [Fitting/Mendelsohn]

c. System D
14971 D is invalid if there are dead ends [Cresswell]
13114 Must-so-does invalid in Deontic Logic D [Fitting/Mendelsohn]
9743 D has the serial condition [Fitting/Mendelsohn]
13706 Deontic accessibility: serial and irreflexive [Sider]
13710 D: add 'what is necessary is possible' [Sider]
19033 Deontic modality: ought to be, or to do [Vetter]
d. System T
16960 Relative possibility may imply system T [Dummett]
14669 Maybe only T is right for metaphysics [Salmon,N]
9744 T has the reflexive condition [Fitting/Mendelsohn]
14607 System T models laws well [Schaffer,J]

e. System K4
9746 K4 has the 'transitive' condition [Fitting/Mendelsohn]
f. System B
14667 B is unreliable on what might have been [Salmon,N]
14668 B can contradict its own axiom [Salmon,N]
14692 Is possibly-realised essential to the world? [Salmon,N]
9745 B has reflexive and symmetric conditions [Fitting/Mendelsohn]
13711 B introduces iterated modalities [Sider]

g. System S4
15544 S4: the actual might have been impossible [Armstrong]
14972 S4 has 14 distinct modalities [Cresswell]
16958 In S4 the actual world has a special place [Dummett]
14671 The S4 axiom can be falsified [Salmon,N]
9747 S4 is reflexive and transitive [Fitting/Mendelsohn]
7794 S4 has fourteen modalities [Girle]
15102 S4 makes necessities necessary [Cameron]

h. System S5
7791 S5 is the simplest possible worlds logic [Lewis,CJ]
14973 S5 reduces modalities to just six [Cresswell]
13604 Real possibilities must use S5 [Ellis]
14627 S5 is invalid for metaphysical modality [Salmon,N]
14686 S5 modal logic ignores accessibility [Salmon,N]
14691 S5 makes possibilities essential [Salmon,N]
14693 Counterpart theory preserves S5 [Salmon,N]
9560 S5 gives the correct logic for necessity [Fine,K]
9065 S5 collapses iterated modalities [Keefe/Smith]
9748 S5 is reflexive, symmetric and transitive [Fitting/Mendelsohn]
15131 S5 makes possibilities non-contingent [Williamson]
14626 In S5 modality is non-contingent [Williamson]
13708 It is easiest for a wff to be valid in S5 [Sider]
7793 S5: possibly-p so necessarily-possibly-p [Girle]
7795 S5 has just six modalities [Girle]
12204 S5 is the logic of metaphysics [Rumfitt]
18814 'Absolute necessity' needs S5 [Rumfitt]
19032 S5 denies contingency grounding necessity [Vetter]

4. Alethic Modal Logic
inference from truths concerning necessity and possibility
9403 Actual, necessary and possible differ in logic [Aristotle]
9470 Modal logic is not an extensional language [Parsons,C]
16456 Not box-diamond, but worlds plus index? [Lewis]
14670 Metaphysical modal logic is sweeping [Salmon,N]
7689 Modal logic was only formalised later [Jacquette]
8859 Three formulae are key to modal logics [Yablo]
9404 Modality affects implication and hence content [Fitting/Mendelsohn]
8480 S5 has stronger necessity than S4 [Orenstein]
7787 Use 'true-in-a-world' instead of 'true' [Girle]
7788 Modal logic has four main equivalences [Girle]
7796 Modality was axioms, before possible worlds [Girle]

5. Epistemic Logic
Inferences between known and believed propositions
13112 Knowers are assumed to know they know [Fitting/Mendelsohn]
13111 a knows P, and for-all-a-knows, P [Fitting/Mendelsohn]
13712 Epistemic logic is reflexive and introspective [Sider]

6. Temporal Logic
Inferences across past, present and future
15413 There are fourteen basic tenses [Burgess]
13113 Will/was sometime, and will/was always [Fitting/Mendelsohn]
13714 Think of modal worlds as different times [Sider]

7. Barcan Formula
formula relating possibility to existence
16519 No one can conceive of a possible substance [Arnauld]
14976 To restrict quantification, reject the Barcan [Cresswell]

16189 Variable domains invalidate the BF [Kripke]
15132 The Barcan formulas fail in varying domains [Kripke]
18823 Barcan says there are non-existent possibles [Stalnaker]
15415 The temporal Barcans are absurd [Burgess]
13728 Barcan: nothing new, Converse: nothing lost [Fitting/Mendelsohn]
13729 Converse is monotonic; Barcan is anti- [Fitting/Mendelsohn]
15135 A constant domain supports the Barcan [Williamson]
15139 Converse Barcan: an unknown defeater? [Williamson]
15130 Possible properties means individuals [Williamson]
19297 The Barcan principles are easy to prove [Hale]
19301 Negative free logic - no Barcans! [Hale]
13718 Is the Barcan Formula a defect? [Sider]
13720 There is also a Converse Barcan Formula [Sider]
13723 The Barcan needs System B [Sider]
15023 Barcan implies possibilia exist [Sider]
19208 Nec it all exists, so it all exists nec! [Merricks]
9449 The Barcan formula implies actual modality [Bird]
18350 Truthmaker rejects the converse Barcan [Rami]
15380 Barcan: can new things come into existence? [Vervloesem]
16186 BF links modal operators to quantifiers [Simchen]
16187 Barcan Formulas clash with Actualism [Simchen]
16190 Poss W had a kid, so x is possibly W's kid? [Simchen]
19036 Barcan blocks fully unactualised possibilities [Vetter]

E. Nonclassical Logics

1. Nonclassical Logics
general ideas about logics which depart from standard logic
15329 Bivalence and no ex-middle, or deny both? [Horsten]
19119 We reason about typicality in objects [Antonelli]

2. Intuitionist Logic
logic which uses 'provable' in place of 'true'
18073 Logic with truth-conditions, or assertability? [Dummett]
18832 Infinite processes can't produce truth-values [Dummett]
18122 Interdefinitions aren't found in intuitionism [Bostock]
18074 Intuitionist assertability needs truth [Kitcher]
15430 Classical/Intuitionist, which contains which? [Burgess]
15431 Is intuitionist logic complete? [Burgess]
18789 Natural deduction suits intuitionist logic [Mares]
18790 Intuitionism leaves out the negation rules [Mares]
13715 Just intuitionist logic, not mathematics? [Sider]
13249 Or-distribution is invalid intuitionistically [Beall/Restall]
8708 Is double negation elimination valid? [Friend]
17925 Not not P just doesn't mean P [Colyvan]
17926 No reductio proofs without double negation [Colyvan]
18798 Intuitionist logic is 2nd-order anti-classical [Rumfitt]
18799 Double negation depends on decidability [Rumfitt]

3. Many-Valued Logic
logic using further values in addition to 'true' and 'false'
8942 Three-value logic has T, F and I (determinate) [Lukasiewicz]
14263 Kleene logic has strong and weak disjunction [Fine,K]
21602 Many-valued logics don't solve vagueness [Williamson]
18787 Presupposition theory needs 3-valued logic [Mares]
8943 Basic logic can fail in three-value logics [Fisher]
16335 Strong Kleene disjunction needs one disjunct [Halbach]
16334 Weak Kleene logic has gaps in its truth [Halbach]

4. Fuzzy Logic
logic using infinite gradations between true and false
6888 Fuzzy sets ground fuzzy logic [Mautner]
6862 Fuzzy logic has continuous truth [Williamson]
11018 Fuzzy sets, quantifiers and modifiers [Read]
8945 Fuzzy logic has a big range of truth values [Fisher]

5. Relevant Logic
logic which requires some relevance of antecedent to consequent
15429 If A, then B, for that reason [Burgess]
8720 Logic with relevance and inconsistency [Priest,G]
13243 Bv-B is necessary, but can fail [Beall/Restall]
13242 Situations produce 'relevance' validity [Beall/Restall]
13245 Conclusions must be 'in' premises [Beall/Restall]
13246 Relevant logic is still classical [Beall/Restall]
13255 Relevance may reject transitivity [Beall/Restall]
13254 A implies A is circular [Beall/Restall]

6. Free Logic
logic with no existence commitment for the quantifiers
8250 Free logic makes no existence assumptions [Meinong]
13846 Empty names, or empty domains [Bostock]

10455 Even free logic struggles with non-existence [Bach]
9672 Free logic is first-order [Priest,G]
11011 Positive,negative,neuter free logics? [Read]
13250 Free' logic terms don't denote [Beall/Restall]
8694 Free logic is for fictional objects [Friend]
18767 Logic for non-existents and empty domain [Anderson,CA]

7. Paraconsistency

logic which accepts a degree of contradiction
12452 Non-contradiction is a psychological matter [Brouwer]
19663 Contradictions are OK, but not inconsistency [Meillassoux]
19664 Conflicting data mustn't crash computers [Meillassoux]
19665 Paraconsistency is of statements, not reality [Meillassoux]
15382 Just respond rationally to inconsistency [Jago]

8. Intensional Logic

logic that includes meanings and concepts, as well as objects
15375 Express variable terms as functions [Fitting]
15376 Also quantify over concepts [Fitting]
18040 Intensional logic maps a predicate space [Magidor]

9. Awareness Logic

logic that adds awareness to the logic of knowledge
15378 Add awareness function to epistemic logic [Fitting]

10. Justification Logics

logic that adds reasons for belief to the logic of knowledge
15379 Formalise proof reasons in justification logic [Fitting]

11. Dynamic Logics

logic that allows for changes in objects and properties
15381 Dynamic logic models changing states [Uckelman]

12. Non-Monotonic Logic

logic that adjust its proofs when new premisses are added
19111 Reasoning: externally or internally defeasible [Antonelli]
19113 Prefer arguments with strong weakest links [Antonelli]
19114 Accept results of conflicting arguments? [Antonelli]
19116 Five core principles for non-monotonic logic [Antonelli]
19117 Rank formulas by how surprising they are [Antonelli]
19118 Is real life reasoning non-monotonic logic? [Antonelli]

F. Set Theory ST

1. Set Theory

general ideas concerning the theory of sets
9987 A non-ordered aggregate I call a 'set' [Bolzano]
15901 Functions and ordinals give set theory [Cantor]
15946 Cantor first discovered progressions then sets [Cantor]
9616 A set is a collection of thought objects [Cantor]
13455 Frege wasn't working with sets [Frege]
17607 Set theory gives foundations for maths [Zermelo]
17608 Retain set theory, avoiding contradictions [Zermelo]
3302 Keep set theory distinct from logic [Quine]
18396 Set brackets { } say it is a unit [Armstrong]
10482 ZF logic is classical 1st-order with identity [Boolos]
18114 Set theory lacks one agreed structure [Bostock]
18395 Sets are sums of singletons [Lewis]
15496 Base set theory on singletons instead? [Lewis]
10807 Set theory will reduce to the singleton [Lewis]
3326 Can sets explain the 'is' of predication? [Benardete,JA]
3327 Distinguish set inclusion from membership [Benardete,JA]
9967 'Impure' sets have a concrete member [Jubien]
13456 Set theory articulates the concept of order [Hart,WD]
13497 ZFC and NBG are the modern set theories [Hart,WD]
8309 Sets are just things, not 'collections' [Lowe]
10888 Either enumerate or abstract sets [Zalabardo]
8474 Set theory is incomplete, unlike logic [Orenstein]
10702 Set theory has three main roles [Potter]
17884 Set theory can plausibly stop somewhere [Koellner]
17893 'Reflection principles' block total set truth [Koellner]
15945 2nd-order set theory quantifies over functions [Lavine]
13451 Iterative sets, or Limitation of Size? [Rayo/Uzquiano]
15657 Sets' consistency isn't internally provable [Halbach]
16309 Formal rigour usually turns to set theory [Halbach]
18830 Set theory is classical, yet doubts bivalence [Rumfitt]

2. Mechanics of Set Theory

formal machinery used in reasoning about sets
a. Symbols of ST
9704 'ran R' is the objects related to [Enderton]
9705 'fld R' is all the objects related [Enderton]

9703 'dom R' is the objects having a relation [Enderton]
9707 'F(x)' is the unique value of F at x [Enderton]
9710 F: A → B says F maps A into B [Enderton]
13443 '∈', across, and '⊆': within layers [Hart,WD]
9697 X1 × X2... × Xn is the 'cartesian product' [Priest,G]
9685 'a,b' is an order set of a and b [Priest,G]
9675 a-ε-X says a is in X [Priest,G]
9673 {a1, a2, ...an} is set of objects [Priest,G]
9674 {x; A(x)} is a set satisfying A(x) [Priest,G]
9677 Greek φ indicates the empty set [Priest,G]
9676 {a} is the 'singleton' set of a [Priest,G]
9681 X = Y means the set X equals the set Y [Priest,G]
9679 [X a proper subset of Y has a symbol] [Priest,G]
9678 [X a subset of Y has a symbol] [Priest,G]
9684 Y-X is the relative complement of X [Priest,G]
9683 [The 'intersection' of X and Y has a symbol] [Priest,G]
9682 XUY is the 'union' of X and Y [Priest,G]

b. Terminology of ST

13201 Set a member, or its members are members? [Enderton]
13204 'Ordered pair' <x,y> is {{x}, {x,y}} [Enderton]
13206 'Linear ordering': transitive, and trichotomy [Enderton]
9699 A 'powerset' is all the subsets of a set [Enderton]
9700 Sets with an empty intersection are 'disjoint' [Enderton]
9701 A 'relation' is a set of ordered pairs [Enderton]
9702 The 'domain' of a relation is its members [Enderton]
9709 A 'maps onto' B if its output is B [Enderton]
9706 A 'function' is a single-valued relation [Enderton]
9708 A 'maps into' B if its output is in B [Enderton]
9713 A 'transitive' relation will carry over [Enderton]
9711 Things bear 'reflexive' relation to themselves [Enderton]
9712 'Symmetric' relations go in both directions [Enderton]
9714 'Trichotomy' requires relations or identity [Enderton]
9717 A 'dominated' set is mapped into another [Enderton]
12337 Transitivity: membership ↔ inclusion [Badiou]
15500 Many subclass divisions; only one for members [Lewis]
15499 Subclass is transitive; membership isn't [Lewis]
18194 'Forcing' makes new ZFC models [Maddy]
9695 An 'ordered pair' has ordered members [Priest,G]
9696 A 'cartesian product' unites sets in n-tuples [Priest,G]
9686 A 'set' is a collection of objects [Priest,G]
9687 A 'member' is an object in a set [Priest,G]
9689 The 'empty set' or 'null set' has no members [Priest,G]
9688 A 'singleton' is a set with only one member [Priest,G]
9690 A set can contain a 'subset' [Priest,G]
9691 A 'proper subset' is smaller than the big set [Priest,G]
9692 A 'union' is all the members of either set [Priest,G]
9694 The 'relative complement' is the leftovers [Priest,G]
9693 An 'intersection' is those things in both sets [Priest,G]
9698 'Induction' retains properties in construction [Priest,G]
10889 Cartesian Products do total pairing [Zalabardo]
10890 'Partial ordering' is antisymmetric [Zalabardo]
10098 The 'power set' is all the subsets [George/Velleman]
10099 The 'ordered pair' <a b> is {{a, b},{a}} [George/Velleman]
10101 Cartesian Product: ordered pairs from A and B [George/Velleman]
10859 Well-ordering needs first elements [Clegg]
15914 'Upper bounds', and 'least upper bounds' [Lavine]
8665 A proper subset contains only the set members [Friend]
8672 A 'powerset' is all the subsets of a set [Friend]

c. Basic theorems of ST

13444 P(x) has more members than x [Cantor]
18098 Sets have more subsets than members [Cantor]
10537 <x,y> can be reduced to {{x},{x,y}} [Dummett]
9680 The empty set 'φ' is a subset of every set [Priest,G]

3. Types of Set

problems to do with distinctive types of set

a. Types of set

18958 Type theory: x 'in' y iff of right type [Putnam]
18107 'Proper classes' cannot be members [Bostock]
13651 'Transitive': members of members are members [Shapiro]
15921 Collections are limited, rules aren't [Lavine]

b. Empty (Null) Set

9157 Empty set is the extension of an empty concept [Frege]
9835 Empty concepts make the empty class [Frege]
16895 The null set is meaningless [Frege]
14238 No objects, no class, so no empty class [Frege]

21548 The null class contains all non-existents [MacColl]
14113 The null class is a fiction [Russell]
18393 Truthmaking doesn't need a null class [Armstrong]
13200 'φ', '∈', '⊆', '⊂', '⊃', '⊄', '⊅', '⊆', '⊇', '⊈', '⊉', '⊊', '⊋', '⊌', '⊍', '⊎', '⊏', '⊐', '⊑', '⊒', '⊓', '⊔', '⊕', '⊖', '⊗', '⊘', '⊙', '⊚', '⊛', '⊜', '⊝', '⊞', '⊟', '⊠', '⊡', '⊢', '⊣', '⊤', '⊥', '⊦', '⊧', '⊨', '⊩', '⊪', '⊫', '⊬', '⊭', '⊮', '⊯', '⊰', '⊱', '⊲', '⊳', '⊴', '⊵', '⊶', '⊷', '⊸', '⊹', '⊺', '⊻', '⊼', '⊽', '⊾', '⊿', '⋀', '⋁', '⋂', '⋃', '⋄', '⋅', '⋆', '⋇', '⋈', '⋉', '⋊', '⋋', '⋌', '⋍', '⋎', '⋏', '⋐', '⋑', '⋒', '⋓', '⋔', '⋕', '⋖', '⋗', '⋘', '⋙', '⋚', '⋛', '⋜', '⋝', '⋞', '⋟', '⋠', '⋡', '⋢', '⋣', '⋤', '⋥', '⋦', '⋧', '⋨', '⋩', '⋪', '⋫', '⋬', '⋭', '⋮', '⋯', '⋰', '⋱', '⋲', '⋳', '⋴', '⋵', '⋶', '⋷', '⋸', '⋹', '⋺', '⋻', '⋼', '⋽', '⋾', '⋿', '⌈', '⌋', '⌌', '⌍', '⌎', '⌏', '⌐', '⌑', '⌒', '⌓', '⌔', '⌕', '⌖', '⌗', '⌘', '⌙', '⌚', '⌛', '⌜', '⌝', '⌞', '⌟', '⌠', '⌡', '⌢', '⌣', '⌤', '⌥', '⌦', '⌧', '⌨', '〈', '〉', '⌫', '⌬', '⌭', '⌮', '⌯', '⌰', '⌱', '⌲', '⌳', '⌴', '⌵', '⌶', '⌷', '⌸', '⌹', '⌺', '⌻', '⌼', '⌽', '⌿', '⋀', '⋁', '⋂', '⋃', '⋄', '⋅', '⋆', '⋇', '⋈', '⋉', '⋊', '⋋', '⋌', '⋍', '⋎', '⋏', '⋐', 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9194 Instead of ZF we can add classes [Dummett]
10492 Very few axioms of set theory are obvious [Boolos]
18115 Axioms for limited or for vast sets? [Bostock]
10191 Set theory will reduce to mereology [Lewis]
15507 Set theory has some unofficial axioms [Lewis]
10073 There cannot be a complete set theory [Smith,P]
3335 Z-F Intuition theory has some ten axioms [Benardete,JA]
17795 Axioms need sets so set theory isn't axiomatic [Mayberry]
17796 A semi-categorical axiomatization of sets [Mayberry]
17833 1st-order ZF is highly non-categorical [Hallett,M]
17834 Non-categoricity means some incompleteness [Hallett,M]
13011 Continuum size needs new axioms [Maddy]
18195 Large Cardinal Axiom: unending sets [Maddy]
10166 ZFC is 'pure', with no 'urelements' [Reck/Price]
10886 Set membership is determinate [Zalabardo]
10096 In ZFC all elements of sets are sets [George/Velleman]
10653 Non-well-founded set theory? [Varzi]
8682 Major set theories differ in their axioms [Friend]
18843 Iterated sets need expanding axioms [Rumfitt]

b. Axiom of Extensionality I

14428 Members, unlike characteristics, fix one class [Russell]
13030 Extensionality: members determine sets [Kunen]
16449 Sets need all members in a world to exist [Stalnaker]
13014 Extensionality is simple, unique, expressive [Maddy]
13013 The Axiom of Extensionality is analytic [Maddy]
10097 If elements the same, the sets are the same [George/Velleman]
10872 Equal sets have same elements [Clegg]
18836 Extension may be false; e.g. empty set [Rumfitt]
18837 Determinate sets can have vague membership [Rumfitt]

c. Axiom of Pairing II

13017 Pairing (1930) seems fairly obvious [Zermelo]
13032 Pairing: any two entities are a set [Kunen]
10100 Axiom of Pairing: a set contains any two sets [George/Velleman]
18851 Pairing guarantees an infinity of sets [Rosen]
10875 Two sets always make up a third set [Clegg]

d. Axiom of Unions III

13016 Union (1899) seems fairly obvious [Cantor]
13033 Union: members of members are a set [Kunen]
10876 All occurring elements for their own set [Clegg]

e. Axiom of the Empty Set IV

13529 Empty Set: a unique null set exists [Wolf,RS]

f. Axiom of Infinity V

18104 If numbers are individuals, you have infinity [Frege]
14440 Logic can tolerate infinite collections [Russell]
14447 Every cardinal has a matching class [Russell]
13430 Infinity: there are an infinity of individuals [Ramsey]
10051 The axiom of infinity is not a truth of logic [Kneale,W and M]
13037 Infinity: the natural numbers are a set [Kunen]
17800 Infinity: the natural numbers are finite (sic) [Mayberry]
13021 The Axiom of Infinity is Cantor's breakthrough [Maddy]
13022 Real numbers require infinite sets [Maddy]
18191 Infinity: completed infinities are allowed [Maddy]
10878 There is a set of all successors [Clegg]
13044 Infinity: at least one limit level [Potter]

g. Axiom of Powers VI

13038 Power: all the subsets make a set [Kunen]
13023 The continuum needs Power Set [Maddy]
10877 All subsets form a new powerset [Clegg]
15936 Power Set is just a collection of functions [Lavine]
18845 Undefined totalities makes Power Set dubious [Rumfitt]

h. Axiom of Replacement VII

13028 Replacement proved necessary later on [Zermelo]
13202 Add Replacement, to explain ordinals [Enderton]
18192 Replacement exceeds the iterative conception? [Boolos]
13034 Replacement: bijections make sets [Kunen]
15899 Replacement had very few implications [Lavine]

i. Axiom of Foundation VIII

13015 Zermelo gave up Foundation [Zermelo]
13039 Foundation: all sets are founded on something [Kunen]
13493 Foundation is key in modern set theory [Hart,WD]
13495 Foundation: sets have disjoint members [Hart,WD]
18193 Foundation: all sets are in V [Maddy]
15930 Foundations says no descending chains [Lavine]

j. Axiom of Choice IX

14443 One representative for each constituency [Russell]

14444 Choice: every class is well-ordered [Russell]
14445 Choice: of unequals, one must be greater [Russell]
14446 Unlike boots, pairs of socks need Choice [Russell]
10196 The Axiom of Choice needs a criterion [Black]
10542 Cardinality of sets needs Choice [Dummett]
13205 Choice picks items to define functions [Enderton]
10775 Choice is now obvious, if it is meaningful [Tharp]
12321 Choice needs an undefinable set [Badiou]
18139 Choice refers to undescrivable sets [Bostock]
13036 Choice: a well-ordering set must exist! [Kunen]
13418 The Choice problems involved excluded middle [Parsons,C]
18270 Choice questions intensions for classes [Coffa]
13461 We need Choice when sets go infinite [Hart,WD]
13462 Choice will well-order any set [Hart,WD]
13024 Choice seems to be unprovable [Maddy]
13026 Choice proves many new theorems [Maddy]
13025 Choice set: unconstructable but actual? [Maddy]
17610 Choice faces the Banach-Tarski paradox [Maddy]
13647 Down Löwenheim-Skolem needs Choice [Shapiro]
10208 A function has a value for every member set [Shapiro]
10252 Is infinite choosing possible? [Shapiro]
10301 We could replace the axiom of choice [Shapiro]
10879 Choosing from each subset gives a set [Clegg]
15717 Choice allows bizarre manipulations [Kaplan/Kaplan]
10146 Axiom of Choice is necessary but dodgy [Feferman/Feferman]
10147 Choice and set theory are consistent [Feferman/Feferman]
10148 Choice: a set of one-from-each-set exists [Feferman/Feferman]
10149 How to define or select your 'choice'? [Feferman/Feferman]
10150 Trichotomy Princ equiv to Axiom of Choice [Feferman/Feferman]
15898 The controversy was functions, not Choice [Lavine]
15920 Collections obey choice, unlike logical sets [Lavine]
10676 Choice is a non-logical set principle [Hossack]
10686 Choice ensures sets-ordinals match [Hossack]

k. Axiom of Existence

13029 Existence: universe non-void [Kunen]
10871 There exists at least one set [Clegg]

l. Axiom of Specification

10887 Known objects must make a set [Zalabardo]
10874 Conditions always produce sets [Clegg]

m. Axiom of Separation

13486 Separation says what satisfies predicates [Zermelo]
13020 Separation makes sets approach contradiction [Zermelo]
13452 Abandon Separation, for a universal set? [Rayo/Uzquiano]

n. Axiom of Comprehension

13031 Comprehension: each definition gives a set [Kunen]
13526 Comprehension: clear specification gives a set [Wolf,RS]
10779 'Predicative' if no bound 2nd-order variables [Linnebo]

o. Axiom of Constructibility V = L

9942 The relative consistency of V=L is proved [Gödel]
10211 Quine controversially prefers V=L [Quine]
13655 Constructibility of all sets is indeterminate [Putnam]
9915 V = L just says all sets are constructible [Putnam]
13040 Constructibility: all sets are constructible [Kunen]
13516 V=L settles all the problems [Hart,WD]

p. Axiom of Reducibility

18130 Reducibility: lowest order possible in levels [Russell]
14459 Reducibility: reduce all functions to one type [Russell]
21720 Reducibility reduces classes to logic [Linsky,B]
13428 Reducibility: functions reduce to elementaries [Ramsey]
21716 Separation replaces Reducibility for types [Gödel]
21717 Reducibility undermines and over-commits [Quine]
18170 If true, Reducibility is redundant [Quine]
18169 Reducibility: propositions are predicative [Maddy]
21705 Reducibility says predicativity is possible [Linsky,B]
17900 Reducibility allows impredicative definitions [George/Velleman]

5. Conceptions of Set

how we should understand the nature of sets

a. Sets as existing

15510 Classes: ethereal, platonic pseudo-entities [Goodman]
7785 Plurals needn't imply sets [Boolos]
15508 Sets seem to be where their members are [Lewis]
15514 Much of Reality depends on set theory! [Lewis]
15523 From one thing, infinities of sets appear! [Lewis]
13631 Are sets logical or mathematical? [Shapiro]
9549 No one can explain set membership [Chihara]

10109 The concept 'set' has no set [George/Velleman]

b. Combinatorial sets

14199 Are sets collections, or containers? [Cantor]

c. Logical sets

9834 A class is the extension of a concept [Frege]
3328 A set is the extension of a predicate [Frege]
21563 Propositions concern members, not sets [Russell]
14461 We can reduce classes to functions [Russell]
11020 Comprehension: concepts determine sets [Read]
15919 Fix sets by a rule or definition? [Lavine]

d. Naïve logical sets

15894 Russell, not Cantor, invented naïve set theory [Russell]
21695 Paradoxes block the most natural set theory [Quine]
10485 Naïve sets hit Russell's Paradox [Boolos]
13441 Comprehension is the root of the trouble [Hart,WD]
9933 Paradoxes worry Frege, but not Cantor [Burgess/Rosen]
9615 Only existing sets now have conditions [Brown,JR]
9613 Is there a set for every condition? [Brown,JR]

e. Iterative sets

10484 Iterative sets have an order of formation [Boolos]
13494 The iterative conception has three problems [Hart,WD]
17801 The set hierarchy doesn't need 'generating' [Mayberry]
10565 Set creation never terminates [Fine,K]
13019 Iterative sets appear at a 'stage' [Maddy]
13640 Some classes are outside iterative sets [Shapiro]
13654 Iterative relations must be well-founded [Shapiro]
13666 Iterative sets are not Boolean [Shapiro]
9617 Iterate sets upwards from the empty set [Brown,JR]
10405 Iterative sets form a hierarchy [Swoyer]
10708 Derive sets from their dependence [Potter]
15900 The iterative conception arrived very late [Lavine]
15931 Iteration needs the Axiom of Infinity [Lavine]
15932 The iterative conception doesn't do much [Lavine]

f. Limitation of Size

15943 Limitation is unobvious, and too strong? [Lavine]
13547 Limitation of Size is 'weak' or 'strong' [Boolos]
18105 Replacement enforces limitation of size [Bostock]
17803 Sets have inherent size limits [Mayberry]
13018 Limitation of Size is a vague intuition [Maddy]
13546 Properties collectivise if not too big [Potter]
15933 If it is set-sized, it's a set [Lavine]

6. Ordering in Sets

ordered sets, and using sets to describe orderings

14126 Order rests on 'between' and 'separation' [Russell]
14127 Order is transitive and asymmetrical [Russell]
11222 <x,y> is defined as the set {{x},{x,y}} [Gupta]
13460 'Well-ordering' must have a least member [Hart,WD]
13457 Partial order: irreflexive and transitive [Hart,WD]
13458 In 'total' order, all members are comparable [Hart,WD]
13490 We can define ordering as membership [Hart,WD]
13653 Well-order:irreflexive,transitive,binary,least [Shapiro]
15913 Well-ordered has a min, and all successors [Lavine]
17759 Ordinals are the central well-ordering of sets [Walicki]

7. Natural Sets

which sets are natural, rather than conventional

8625 Numbers are not based on physical facts [Frege]
8469 Only meaningful predicates have sets [Russell]
21693 Not all conditions will produce sets [Quine]
9406 Everybody can spot natural classes [Quinton]
17837 Ur-elements make set-theory applicable [Hallett,M]
9984 We can have a series with identical members [Tait]
17824 The master science is objects, in sets [Maddy]
8755 Sets are ways of perceiving real objects [Maddy]
9571 ZFU refers to physical 'urelements' [Chihara]
9642 Flocks of birds are not sets [Brown,JR]

8. Critique of Set Theory

objections to the whole idea of set theory

11064 Reduce classes to propositional functions [Russell]
7548 Classes are simply logical constructions [Russell]
8745 Classes are just logical fictions [Russell]
6436 We can replace classes with properties [Russell]
10044 Russell denies extensional sets [Russell/Whitehead]
18208 Classes are convenient, not real [Russell/Whitehead]
13536 There are no uncountable sets [Skolem]
10304 Intuitionism largely undermines set theory [Bernays]

3355 Functions might be used to replace sets [Neumann]
 9920 Different sets from the same objects? [Goodman]
 3336 Two things can't entail three things [Quine]
 10699 Are there sets as well as Cheerios? [Booleans]
 8972 Can two entities be several different sets? [Inwagen]
 9570 Set theory assumes non-existents, so is false [Field,H]
 6548 Physicalists must naturalise or reject sets [Lycan]
 13481 Rethink sets in terms of categories [Hart,WD]
 7035 Does God create the world, then add classes? [Heil]
 10207 Anti-realists reject set theory [Shapiro]
 18151 Replace sets by their open sentences? [Chihara]
 8758 Talk of open sentences, not sets [Chihara]
 9563 Wolf packs survive a single death [Chihara]
 10108 Set theory is not general enough for logic [George/Velleman]
 10687 Maybe we reduce sets to ordinals [Hossack]

G. Formal Mereology

1. Mereology

formalised general theory of how parts relate to wholes

15845 The one is many, the many are one! [Plato]
 13270 Are a part and whole one or many? [Aristotle]
 13282 Relativise wholeness to different measures [Aristotle]
 10397 Base mereology on natural divisions? [Abelard]
 10706 Dedekindat first preferred mereology [Dedekind]
 14121 Part-whole relations are undefinable [Russell]
 10657 Utah's counties, state and acres are identical [Goodman]
 10806 Megethology adds plurals to mereology [Lewis]
 10662 Nihilistic or Universal mereology [Inwagen]
 13331 Part and whole are asymmetrical [Fine,K]
 9928 Existence of entities entails conglomerates [Burgess/Rosen]
 15004 'Gunk' has infinite division into parts [Sider]
 15841 Mereology was a revolt against set theory [Harte,V]
 8465 Nominalists try replacing sets with mereology [Orenstein]
 12815 Classical mereology is weak in practice [Simons]
 12819 'Part' is a word with several meanings [Simons]
 12832 Complement: Universe less an individual, x-bar [Simons]
 12834 Five criticisms of mereology [Simons]
 10648 Mereology need not be nominalist [Varzi]
 10655 Mereological atoms, composing everything? [Varzi]
 10659 A universal whole, but no universal part [Varzi]
 10707 Mereology elides cards and suits [Potter]
 13258 Mereology is wrong on object existence [Koslicki]

2. Terminology of Mereology

technical vocabulary used in formal mereology

12822 Proper or improper part: $x < y$ [Simons]
 12823 Overlap: part in common, $x \circ y$ [Simons]
 12824 Disjoint: don't overlap, $x \mid y$ [Simons]
 12825 Product: sum of overlaps, $x \cdot y$ [Simons]
 12826 Sum: overappable combination, $x + y$ [Simons]
 12827 Difference: remainder of an overlap, $x - y$ [Simons]
 12829 General product: nucleus of F_s , $\&\pi;x(F_x)$ [Simons]
 12828 General sum: sum of F_s , $\&\sigma;x(F_x)$ [Simons]
 12830 Universe: the sum of everything, U [Simons]
 12831 Atom: individual without parts, $At\ x$ [Simons]
 12844 Dissective: all parts are still the stuff [Simons]

3. Axioms of Mereology

basic principles for reasoning about parts and wholes

17245 A part of a part is a part of a whole [Hobbes]
 10564 Combine set theory with mereology? [Fine,K]
 18999 A part must imply a remainder [Yablo]
 14984 Take parts as primitive, or overlaps? [Sider]
 12813 Two standard systems for part-whole [Simons]
 12816 Mereology bad on time and modality [Simons]
 12821 Parthood is transitive and asymmetric [Simons]
 18847 There are no intermediate aggregate parts [Simons]
 10677 Extensional mereology is concisely defined [Hossack]

4. Groups

collections of individuals with a unifying concept

12846 Groups are united collections [Simons]
 12848 Same members, two groups [Simons]
 12861 Wolves and a pack have different identity [Simons]

5. Theory of Logic

A. Overview of Logic

1. Overview of Logic

broad views about different systems of logic

18794 Logic is formal rules for all thinking [Kant]
 7728 Frege has signs for judging and expressing [Frege]
 16881 We want the powerful core of logic [Frege]
 6110 Your language dictates your logic [Russell]
 9358 There are several logics which work well [Lewis,CI]
 16908 Language can prevent logical mistakes [Jeshion]
 18724 In logic nothing is hidden [Wittgenstein]
 13979 Logic studies consequence, compatibility etc [Ryle]
 13010 Empirical logic needs prior logic [Boghossian]
 9020 Basic logic has four components [Quine]
 12666 Base logic on acceptability, not truth [Ellis]
 11066 The metalanguage justifies deduction [Dummett]
 9722 'Implicature' from the fact of saying it [Enderton]
 3809 It is absurd for all logic to need rules [Searle]
 3093 All states of affairs are logically connected [Harman]
 12595 We understand logic, but not inference [Harman]
 10766 Logic demonstrates, or shows structures [Tharp]
 12342 Topos theory means many logics [Badiou]
 10282 Logic is sound argument, or languages [Hodges,W]
 13831 Logic concerns sentence-transitions [Prawitz]
 9457 Extensionalism or intensionalism in logic? [Jacquette]
 7681 Logic concerns inferences among possibilities [Jacquette]
 8091 Situation theory is logic-plus-context [Devlin]
 13627 Natural language has no 'correct' logic [Shapiro]
 13642 Logic gets new propositions from old ones [Shapiro]
 14980 There exists a 'correct' logic [Sider]
 15000 Disjunction can't just be legislated [Sider]
 13235 Logic studies consequence, not truths [Beall/Restall]
 13238 It's only logic when variables are involved [Beall/Restall]
 17741 What are the 'building blocks' of logic? [Walicki]
 11211 Successful bad argument isn't good argument [Rumfitt]
 18815 Logic is laws which expand deductions [Rumfitt]

2. History of Logic

origins of the various systems of formal logic

19369 Give basic concepts, then combine them [Lull]
 8686 Boole made logic more mathematical [Boole]
 7622 In 1879 Frege developed second order logic [Frege]
 10247 Mathematicians must create new logic [Veblen]
 11022 Natural deduction NK in 1934 [Gentzen]
 18954 Pre-1860 logic couldn't handle relations [Putnam]
 5637 Logic concerns extensions, not intensions [Scruton]
 17786 Logic is a branch of mathematics [Mayberry]
 8087 Golden age of logic, 1900-1985 [Devlin]
 8089 Intensional logic incorporates meaning [Devlin]
 13667 C.1930 first-order versus higher-order [Shapiro]
 13668 1918: completeness of propositional logic [Shapiro]
 13669 Which first, sets or numbers? [Shapiro]
 13234 Logic is no longer knowledge of truths [Beall/Restall]
 18912 Which was prior, mathematics or logic? [Engelbreiten]

3. Value of Logic

relative importance of logic in life and reason

16728 Logicians recognise too few things [Fitzralph]
 12992 Logic teaches order in thought [Leibniz]
 14780 Doubts about our reason motivate logic [Peirce]
 9179 Frege was contemptuous of language [Frege]
 16867 Logic proves - and reveals logical relations [Frege]
 14880 Logic is just slavery to language [Nietzsche]
 7188 Logic is based on a man-made scheme [Nietzsche]
 7145 Logic desires a simple single viewpoint [Nietzsche]
 7144 Logic falsely assumes identity [Nietzsche]
 21588 Logic is the research method of philosophy [Russell]
 6107 Logic is basic, not metaphysics [Russell]
 10152 Set theory and logic are useful fairy tales [Tarski]
 6428 Logic is just tautologies [Wittgenstein]
 9244 Can logic lead us to death? [Camus]
 9028 Languages filter logic from reality [Quine]
 8219 Logic has an infantile idea of philosophy [Deleuze/Guattari]
 8246 Logic hates philosophy [Deleuze/Guattari]
 13479 Logic give rules for finding truth [Burge]

3599 Deduction is about entailment not belief [Williams,M]

13378 Maths logic is no good for philosophy [Jubien]

6858 I wanted to think in formal logic [Williamson]

9390 Logic isn't a substitute for thinking [Rumfitt]

4. Pure Logic

logic as a completely self-contained subject

19370 Blind thought: reasoning without understanding [Leibniz]
 14452 Logic must be completely general [Russell]
 16486 Psychology needs logic, physics doesn't [Russell]
 10048 Logical and non-logical are not distinct [Tarski]
 11062 A priori logic because we are logical [Wittgenstein]
 3746 Logic seems to work for unasserted sentences [O'Connor]
 13845 Logics are various abstractions from English [Hacking]
 2442 Inferences are part of the causal nexus [Fodor]
 15404 Logic now just studies formal systems [Burgess]
 14187 Topic-neutrality allows logic anywhere [Read]
 10690 Formal logic is invariant, or empty, or norms [Beall/Restall]
 13232 Logic studies interpreted languages [Beall/Restall]
 22246 Logic is presumed to be synchronic [Recanati]
 11058 Logic depends on rational animals [Hanna]
 11072 Logic is personal, with a universal core [Hanna]
 10781 Pure logic: no ontology or presuppositions [Linnebo]
 10638 Pure logic is general, formal and direct [Linnebo]
 13850 All formal validity can be syntactic [Engelbreiten/Sayward]

5. First-Order Logic

logic where variables only refer to objects

18956 First-order validity involves classes [Putnam]
 10767 FOL is complete, but can't catch maths [Tharp]
 13840 1st-order combines strength with restraints [Hacking]
 13844 1st-order can't do branching quantifiers [Hacking]
 18108 First-order logic is not decidable [Bostock]
 18109 1st-order logic is complete, and hence compact [Bostock]
 10478 |= and |- mean the same in first-order [Hodges,W]
 19315 Build sentences from non-sentences [Kirkham]
 17788 1st-order features arise from weakness [Mayberry]
 13624 First-order logic may be overrated [Shapiro]
 13660 Maybe 1st-order restrictions are good [Shapiro]
 13662 First-order logic is a recent afterthought [Shapiro]
 13673 First-order logic has finitude built in [Shapiro]
 10588 First-order logic has some key features [Shapiro]
 10897 A 'sentence' has no free variables [Zalabardo]
 10986 Not all validity is caught in 1st-order logic [Read]
 13534 In 1st-order, |= and |- coincide [Wolf,RS]
 13535 First-order logic is only weakly complete [Wolf,RS]

6. Classical Logic

system of logic accepted as the modern norm

12376 Reductio assumes excluded middle [Aristotle]
 13337 Create a formal language in five steps [Tarski]
 9002 Logic: truth-function, quantifiers, =, and sets [Quine]
 9820 Classical and high-order logical truth differ [Dummett]
 3098 Deductive logic is the only logic there is [Harman]
 13346 Classical logic is based on truth [Bostock]
 13545 Basic logic can't do finite-infinite [Bostock]
 13822 Fictional characters wreck elementary logic [Bostock]
 12430 Classical logic is how we assess things [Kitcher]
 12431 Experience could change my logic [Kitcher]
 9463 Classical logical is simply defined [Jacquette]
 15405 Classical logic neglects modal and temporal [Burgess]
 15421 Classical logic ignores the non-mathematical [Burgess]
 15427 Cut says entailment is transitive [Burgess]
 18784 Connectives relate nicely in classical logic [Mares]
 18793 Classical logic only considers truth values [Mares]
 10972 Classical logic has a non-empty domain [Read]
 15020 Classical logic misfits natural language [Sider]
 4705 More than one legitimate logic? [O'Grady]
 8951 Four rules define 'classical logic' [Fisher]
 15326 The liar paradox threatens classical logic [Horsten]
 16333 Mathematics needs classical logic [Halbach]
 13849 Classical logic rests on truth and models [Engelbreiten/Sayward]
 18805 Classical logic is defensible, not provable [Rumfitt]
 18804 Rules (not Bivalence) endorse classical logic [Rumfitt]
 18827 Classical truth-tables need Bivalence [Rumfitt]

7. Second-Order Logic

logic extending variables to predicates and relations

11033 There are predicates of predicates [Aristotle]

9188 First-order is complete, second-order isn't [Gödel]
13639 Second-order items lack proper identity [Quine]
8789 What is the ontology of second-order logic? [Hale/Wright]
10014 No predicate entities; no second-order logic [Quine]
10828 Quantifying over predicates reifies them [Quine]
10794 Nominalists deny higher-order abstracta [Marcus (Barcan)]
10769 2nd-order logic expresses set-theory [Tharp]
13842 Second-order completeness needs additions [Hacking]
14249 Treat second-order logic as plural logic? [Boolos]
10830 Second-order logic has set-theory problems [Boolos]
10225 Plural quantifiers for second-order logic? [Boolos]
10736 Plural quantifiers OK for 2nd-order [Boolos]
10780 Plural 1st-order can express 2nd-order [Boolos]
10616 Second-order offers first-order proofs [Smith,P]
10015 Higher-order logic is NOT set theory! [Hodes]
17791 Only 2nd-order logic captures maths [Mayberry]
10594 Henkin semantics fits plural, not 2nd order [Maddy]
15944 2nd-order logic commits less than sets do [Shapiro]
13629 Three types of second-order semantics [Shapiro]
13650 Henkin: relation and function variables [Shapiro]
13645 Standard semantics just has one domain [Shapiro]
13649 Standard semantics loses some 1st-order stuff [Shapiro]
10298 Is second-order 'logic' really mathematics? [Shapiro]
10299 Second-order logic can't codify inferences [Shapiro]
19296 If the domain is sets, they're just objects [Hale]
11024 In incomplete systems, semantics comes first [Read]
21657 Maybe properties must be 'typed' [Hofweber]
10704 In 2nd order, only formation rules formal [Potter]
15926 2nd-order assumes relations in place [Lavine]
10751 Logic needs sets and knowledge at 2nd-order [Rossberg]
10757 Henkin semantics has a second domain [Rossberg]
10759 Pick from seven semantics for SOL [Rossberg]

8. Logic of Mathematics

logic that is used in the practice of mathematics

19597 Logic should be applied to mathematics [Novalis]
16862 Maths is continual application of logic [Frege]
16863 Is some maths reasoning not logical? [Frege]
14462 Maths and logic are merging [Russell]
10035 Mathematical Logic is the supreme science [Gödel]
11026 Maths made classical logic extensional [Fitting]
10985 Capturing arithmetic disbars 2nd-order logic [Read]
13241 Maths is the model for classical logic [Beall/Restall]

9. Philosophical Logic

overview of the directions of present and future logics

15403 Philosophical logic is a branch of logic [Burgess]
18739 Philosophical logic had three stages [Horsten/Pettigrew]

B. Logical Consequence

1. Logical Consequence

defining when one idea logically follows another

12373 Arbitrary proof is thus universal [Aristotle]
13342 Carnap defined consequence by contradiction [Tarski]
18812 Consequence is good non-logical assignment [Tarski]
13681 Consequence is preserved in substitutions [Quine]
13827 Logical consequence needs to be unpacked [Prawitz]
14181 Something prevents true followed by false [Etchemendy]
14180 Fix interpretation, vary situation, or vice v. [Etchemendy]
10260 Define logical consequence via impossibility [Field,H]
17286 Consequence is verification in a true world? [Fine,K]
10300 Define consequence through logical terms [Shapiro]
14188 Arguments aren't all valid through form [Read]
14182 Skip meaning, and make logic just formal? [Read]
14183 Suppressed premises must be stated? [Read]
10970 Consequence needs analysis and techniques [Read]
10984 Logical consequence isn't purely logic [Read]
13679 Logical consequence as provability? [Sider]
13678 Models best explain logical consequence [Sider]
13680 Is logical consequence a primitive notion? [Sider]
13682 Consequence is following necessarily? [Sider]
15029 Some accounts of consequence are modal [Sider]
11061 Intensional consequence uses content [Hanna]
18755 Validity is truth in all models [McGee]
13288 Substitution or model view of consequence [Koslicki]
12195 Soundness can be very informal [Rumfitt]
12199 Supposition consequence is modal [Rumfitt]

12201 Logical consequence is not deductibility [Rumfitt]
18813 Being extensible is the key consequence [Rumfitt]

2. Types of Consequence

different modes of logical consequence

19058 Syntactic/semantic consequence pos/neg? [Dummett]
9718 Validity is semantic or proof-theoretic [Enderton]
10259 Consequence is semantic or deductive [Shapiro]
10691 Consequence by proof or good models [Beall/Restall]
13253 There are many consequence relations [Beall/Restall]
10753 Model theory captures logical consequence [Rossberg]

3. Deductive Consequence |-

following from a formula in proof-theory

11148 Deduction is necessity from supposition [Aristotle]
18277 q and p (not some 'laws') justify $p \rightarrow q$ [Wittgenstein]
13623 \vdash and ϕ : a provable, or it's a theorem [Bostock]
13722 A 'theorem' is an axiom or a result [Sider]
10752 \vdash is deduction; \models is both true in a model [Rossberg]
18808 Normal deduction assumes the Cut Law [Rumfitt]

4. Semantic Consequence \models

fitting with the truth of some formulae

19237 Deduction is facts guaranteeing other facts [Peirce]
10694 Consequence: follows in all models [Tarski]
10479 A logical consequence is always valid [Tarski]
13344 A sentence follows if all models model it [Tarski]
13347 Validity is just following from premises [Bostock]
13348 \models means 'therefore', rather than 'entails' [Bostock]
13349 Three readings for \models [Bostock]
10477 \models also means 'logical consequence' [Hodges,W]
13626 \models is ineffective in second-order logic [Shapiro]
13637 If a logic incomplete, then \models is ineffective [Shapiro]
21611 Validity is truth in every model [Williamson]
10893 \models if a truth-set makes the next one true [Zalabardo]
10899 Gamma \models phi if it always follows [Zalabardo]
10695 Logical consequence is necessary or relative [Beall/Restall]
13240 A sentence follows if it is modelled [Beall/Restall]
14506 Red-so-coloured preserves truth without proof [Koslicki]

5. Modus Ponens

rule that the entailment of a true formula is also true

8078 The Stoics identified modus ponens [Chrysippus]
20309 Implications of adequate are adequate [Spinoza]
5395 The implications of a truth are always true [Russell]
3094 Logical inference doesn't compel belief [Harman]
13614 Detachment and MPP are related [Bostock]
13617 MPP is a converse of Deduction [Bostock]
10257 Does modus ponens need complete proofs? [Shapiro]
14184 The 'if-then' premise seems to add nothing [Read]
15341 Psi from phi iff phi-implies-psi is a theorem [Horsten]

6. Entailment

if P is true then Q has to be true

6877 Entailment is logical requirement [Mautner]
14471 Meanings produce analytic entailments [Thomasson]

7. Strict Implication

it can never be that P is true and Q is false

8204 Lewis & Russell were confused about 'if..then' [Quine]
9359 Should random sentences imply one another? [Lewis,CI]
8082 Implication implies links between statements [Devlin]
6880 Strict implication is paradoxical [Mautner]
7789 'Entailment' is successful strict implication [Girle]

8. Material Implication

truth of P implies the truth of Q

12196 If-p-then-q is not(p-and-not-q) [Sext.Emirpicus]
14106 Implication cannot be defined [Russell]
14108 Beware of circular definitions of implication [Russell]
9520 Material implication has paradoxes [Lemmon]
6879 Not(p and not-q), but are they connected? [Mautner]
6878 Speakers imply, audiences infer [Mautner]
10689 'Material consequence' involves content [Beall/Restall]

C. Ontology of Logic

1. Ontology of Logic

overview of what must exist to enable logic

19256 We hope reality embodies human logic [Peirce]
21222 The world makes logic impure [Husserl]
21223 Phenomenological logic is subjectively based [Husserl]

14167 There are just things, predicates, relations [Russell]
12444 Logic is about the real world [Russell]
14464 Logic can be known a priori [Russell]
10057 Logic can only assert hypothetical existence [Russell]
21707 Russell saw logic as 'interpreted' [Russell/Whitehead]
18162 Propositions of logic are tautologies [Wittgenstein]
12219 Modal claims depend on description [Quine]
18962 Logic has an empirical foundation [Putnam]
11970 Logicians love pure entities [Kaplan]
12341 Logic maps relations [Badiou]
10829 It isn't logic if it says sets exist [Boolos]
12766 We abstract logical space from reality [Stalnaker]
10454 Existence and its denial are hard in logic [Bach]
10253 Three options in the ontology of logic [Shapiro]
14943 Logic rests on information-processing? [Ladyman/Ross]
15652 Reduce 2nd-order properties to truths? [Halbach]

2. Platonism in Logic

that logical entities have independent existence

13473 Frege believes in logical order as fact [Frege]
15571 There is no atemporal realm of validity [Heidegger]
7537 Logic is just tautologies, not Forms [Wittgenstein]
7682 Logic must involve objects, properties, truth [Jacquette]
8950 Logic is formalization, not ontology [Fisher]

3. If-Thenism

logic is only inference without commitment to initial truths

10054 Maths has truths without existence [Descartes]
10055 Existence of objects is irrelevant to proofs [Locke]
10056 At bottom eternal truths are all conditional [Leibniz]
21493 Pure mathematics deals only with hypotheses [Peirce]
14783 Logic asserts ends from hypothetical means [Peirce]
10053 Axioms can have implications without truth [Russell]
10064 Quine quickly dismisses If-thenism [Quine]
10066 Putnam coined the term 'if-thenism' [Putnam]
10061 If-thenism relies on axioms [Musgrave]
10065 If-thenism needs first-order logic [Musgrave]
17620 Which 'ifs' are worth studying? [Maddy]

4. Logic by Convention

logic is just a set of rules and concepts agreed by people

13251 People can specify personal logics [Carnap]
18709 Laws of logic are only like laws of chess [Wittgenstein]
12394 We choose between rules and their inferences [Goodman]
20296 Conventional logic needs logic for each case [Quine]
8998 Logic and mathematics are not conventional [Quine]
8999 Inferring logic from convention needs logic [Quine]
9000 Communication precedes conventions [Quine]
19289 Conventionalism concerns meaning, not truth? [Hale]

D. Assumptions for Logic

1. Bivalence

propositions can only be true or false

21593 For future events, reject bivalence [Aristotle]
22154 Bivalence is a feature of reality [Aristotle]
21677 Not-true must be false;not-false must be true [Cicero]
19102 Bivalence is just assumed for enquiry [Peirce]
19043 Bivalence is for objects, not just sentences [Quine]
8173 No bivalence if no reference or vagueness [Dummett]
8195 Three types of statement are undecidable [Dummett]
6889 Vagueness seems to undermine bivalence [Mautner]
21606 'Bivalence' is a meta-linguistic principle [Williamson]
18780 Normal logic forces acceptance of bivalence [Mares]
18786 Excluded middle standardly implies bivalence [Mares]
4752 Is bivalence just excluded middle? [Engel]
4700 Maybe truth is indeterminate, or variable [O'Grady]
9119 No one has successfully denied bivalence [Sorensen]
4638 The concept is being 'thin' is not bivalent [Baggini /Fosl]
6163 No excluded middle without bivalence [Rowlands]
18840 Vagueness implies dropping Bivalence [Rumfitt]

2. Excluded Middle

propositions must be either true or false

1312 Things must be either true or false [Aristotle]
1701 Prayers are neither true nor false [Aristotle]
12363 Everything is truly asserted or denied [Aristotle]
21668 Reject the fatalistic excluded middle [Epicurus]
6023 Every proposition is either true or false [Chrysippus]
2669 Is the Liar Paradox true or false? [Cicero]

21595 Exclude middle leads to contradictions [Hegel]
18844 Excluded Middle is essential for maths [Hilbert]
21539 If p denied, not-p must be asserted? [Russell]
18944 Russell's theories preserve excluded middle [Sawyer]
2947 Discoveries depend on excluded middle [Russell]
15941 Ex middle is outdated and conventional [Brouwer]
9357 Excluded middle is our love of dichotomies [Lewis,CI]
19192 Truth proves semantic excluded middle [Tarski]
9024 Exclude middle has three definitions [Quine]
7334 Anti-realists want to ditch excluded middle [Dummett]
8179 Excluded middle is logical bivalence [Dummett]
9195 Intuitionists want proof, not true or false [Dummett]
17587 Excluded Middle needs definiteness [Inwagen]
9775 Does excluded middle fail for vagueness? [Fine,K]
10251 Is excluded middle just omniscience? [Shapiro]
8729 Is excluded middle committed to transcendence? [Shapiro]
9605 If a proposition is false its negation is true [Brown,JR]
21605 'A or not A' in the object language [Williamson]
10111 Excluded Middle is a mark of realism [George/Velleman]
15934 Proof by contradicton need excl middle [Lavine]
8709 Excluded middle is syntactic, not semantic [Friend]
17924 Ex-M: P v ~P; Bivalence: T(P) v F(P) [Colyvan]

3. Contradiction

when two statements are in logical conflict

10121 Contradiction does not reveal true or false [Pascal]
2111 Contradictions are false, their opposites true [Leibniz]
18736 Contradiction concerns rules, not reality [Wittgenstein]
12194 Contradictions are formal and informal [Rumfitt]

4. Identity in Logic

logical assertions that two objects are identical

13427 a=b is vacuous or absurd [Ramsey]
18759 Identity seems to qualify as 'logical' [Tarski]
18154 'Tractatus' avoids the identity sign [Wittgenstein]
13429 Replace identity sign with meaning difference [Wittgenstein]
10012 Quantification still complete with identity [Quine]
18897 Dyadic identity needs laws to fix it [Sommers]
10697 Identity is logical, and powerful [Bools]
13799 '=' means 'is the same things as' [Bostock]
13800 Identity is self-identity and Leibniz [Bostock]
13803 Identity is needed for 'at least two things' [Bostock]
3299 Identity is reflexive, symmetrical, transitive [Baillie]
10011 Identity is 1st-order, defined at 2nd-order [Hodes]
6051 Property attributions assume identity [McGinn]
6055 Non-contradiction & excluded mid need identity [McGinn]
6059 Identity is a single undefined basic relation [McGinn]
13851 = can't be eliminated [Engelbreitsen/Sayward]

E. Structures of Logic

1. Logical Form

structure of a sentence relevant to its logical role

4730 Subject-predicate reflects substance-accident [Aristotle]
18896 Aristotle splits terms, with a copula [Aristotle]
21400 For 'Man is...', say 'If x is a man, then...' [Stoic school]
6020 Generalisations are hypothetical existentials [Sext.Empiricus]
7729 Not subject/predicate, but function/argument [Frege]
8645 Sentences can be rewritten to suit [Frege]
4975 We can move subject/predicate split [Frege]
7758 Identity statements are often predications [Russell]
6092 A logical language gives a word to each object [Russell]
6101 'x' does not occur in 'x does not exist' [Russell]
6115 Vagueness and elusive symbols are problems [Russell]
7528 The key idea is subject-plus-predicate [Russell]
18276 Constituents compose the logical form [Wittgenstein]
18268 Logical form is apparent, or real [Wittgenstein]
18743 Seek the grammar of problems, not the logic [Wittgenstein]
8358 Ordinary language has no precise logic [Strawson,P]
18893 Logical form obscures ordinary reasoning [Sommers]
7332 Innumerable logical forms are unknown to us [Davidson]
3080 Logical form involves logical elements [Harman]
3081 Theories of truth involve logical form [Harman]
3084 Propositions depend on language [Harman]
16464 Find form, to clarify and to argue [Stalnaker]
8132 We now understand logical form much better [Burge]
6339 Logical forms determine entailments [Horwich]
2544 Thoughts have appearance and logical form [McGinn]

8072 Logical form may depend on context of use [Devlin]
12220 Do sentence types or tokens have form? [Fine,K]
18168 Propositional functions contain variables [Maddy]
13632 Correct logical form lacks criteria [Shapiro]
10407 Logical Form explains sentence behaviour [Swoyer]
10373 Logical form may have a bogus property [Schaffer,J]
10754 The logical constants show the logical form [Rossberg]
18905 Analyse as two terms glued by predication [Engelbreitsen]
18922 Logical form is not actually deep [Engelbreitsen]
18741 Formalisation gives precision and connections [Horsten/Pettigrew]

2. Logical Connectives

terms used to make steps in logical arguments

a. Logical connectives

21586 Connectives are formal and contextual [Russell]
21597 Even logical connectives have vagueness [Russell]
6563 'And' and 'not' are non-referring terms [Wittgenstein]
10905 The logical constants do not represent [Wittgenstein]
11065 For logical constants, role is meaning [Gentzen]
11023 The rules define the connectives [Gentzen]
11213 Symbols have introduction and elimination [Gentzen]
13829 Logical truth needs definitions of connectives [Hacking]
17896 We need the meaning of 'and' before its role [Prior,AN]
17898 'Tonk' is non-conservative, so inconsistent [Belnap]
11021 Inference patterns don't define connectives [Prior,AN]
13836 Connective based on rules is absurd [Prior,AN]
14352 Truth functions: the parts fully fix the whole [Jackson]
13837 Syntax fixes the meaning of connectives [Hacking]
13357 Truth-tables define the truth-functors [Bostock]
13825 Define connectives by introduction rules? [Prawitz]
11175 Logic rests on inference, not implications [Fine,K]
15407 Big language for expression, small for proofs [Burgess]
10212 Classical connectives aren't ordinary language [Shapiro]
16974 Rules give the natures of logical concepts [Correia]
18782 Study connective via models or via proof [Mares]
14186 Connectives just record fact-combinations [Read]
15019 Fix logic by proof, meaning, or topic? [Sider]
4704 Five logical symbols, or just one? [O'Grady]
18489 Connectives are non-meaning sentence relations [MacBride]
18751 'Because' is a non-truth-functional connective [McGee]
11210 Same sense, same truth table? [Rumfitt]
11212 Sense of connectives comes from rules [Rumfitt]
18802 Definitions of logical constants must use them [Rumfitt]

b. Basic connectives

14105 There are 8 or 9 logical constants [Russell]
10762 In PL 'not' and 'and' can express everything [Tharp]
10896 PL needs \neg and one other [Zalabardo]

c. not

20788 Contradicting contradiction is affirmation [Stoic school]
22017 Normativity implies negation [Fichte]
21777 Negation of negation is a self-relationship [Hegel]
18722 Negation is not just reversal of truth-value [Wittgenstein]
16488 Is 'not' indispensable to complete knowledge? [Russell]
18723 We use 'not' without an explicit rule [Wittgenstein]
18903 Does negation basically refer to terms? [Sommers]
19052 Natural 'not' doesn't apply to sentences [Dummett]
18801 See negation directly assumes negation! [Dummett]
18476 'A is not-F' could be positive ('not blind') [MacBride]
18908 Standard logic only negates sentences [Engelbreitsen]

d. and

16967 'Are A and B at home?' isn't one question [Aristotle]
17895 Can separate assertions become one? [Mill]
18718 'And' has meaning because it works [Wittgenstein]
12597 P fine; Q fine; P-and-Q unlikely! [Harman]
12664 A truth-table is what defines 'and' [Fodor]
12010 Fix 'and' by truth-tables, or by rules? [Forbes,G]

e. or

21676 True disjunctions, false disjuncts? [Epicurus]
16479 'Or' shows hesitation, even in animals [Russell]
16480 A disjunction expresses indecision [Russell]
16481 'Or' expresses our minds, not the world [Russell]
16483 Imperfect memory produces disjunctions [Russell]
16487 'Or' for psychology, different 'or' for logic? [Russell]
16465 Ontology of disjunction is deceptive [Stalnaker]
15424 Asserting disjunctions is really needed [Burgess]

3. Constants in Logic

terms, such as names, which have a fixed value

14104 Constants are definite and unambiguous [Russell]
10453 Constants work like proper names [Bach]

4. Variables in Logic

symbols which do not yet have a determined value

14114 Variables only exist in their role [Russell]
5772 The idea of a variable is fundamental [Russell]
17699 Variables aren't essential in logic [Schönfinkel]
7784 'Object' is a pseudo-concept - use x [Wittgenstein]
12221 'Corner quotes' mean the content of.. [Quine]
1618 Ontology should focus on claims of existence [Quine]
13839 Could we replace variables with arrows? [Hacking]
17558 Variables are like pronouns, not syntax [Inwagen]
9148 Variables are objects, not signs [Fine,K]
15590 Variables: Fregean syntax, Tarskian semantics? [Fine,K]
15591 Do variables have one role, or not? [Fine,K]
15592 A variable is just its range of values? [Fine,K]
15593 Variables are special functional terms? [Fine,K]
15595 Reduce quantifiers to component algebra? [Fine,K]
15594 Gasp a variable by an arbitrary instance? [Fine,K]
15409 Any variables in atomics are free [Burgess]
13696 'Free' variables mean no T or F [Sider]
9135 Generalizations use variables not abstractions [Sorensen]
12797 Non-count variables have 'some value' [Laycock]

5. Functions in Logic

elements in logical systems to create new objects

8490 Functions about functions are second-level [Frege]
21566 Values give propositional functions a meaning [Russell]
18961 Are functions sets, or are they primitive? [Putnam]
13811 There are 'total' and 'partial' functions [Bostock]
13812 A 'zero-place' function is a name [Bostock]
10076 The 'range' is the values a function creates [Smith,P]
10074 A 'total function' maps every element uniquely [Smith,P]
10075 A 'partial function' maps only some elements [Smith,P]
10605 The identity of functions is extensional [Smith,P]
10612 A functions 'fixed point' is self-mapping [Smith,P]
10209 Functions are arbitrary correspondences [Shapiro]
13700 'Total' functions always have output [Sider]
15105 F(x) walked into a bar [Sommers,W]

6. Relations in Logic

role of terms which connect objects into relationships

17744 De Morgan started the study of relations [De Morgan]
13501 Some inferences rely on relations [De Morgan]
19238 We can have a logic based on relations systems [Peirce]
8492 Relations are functions with two arguments [Frege]
10036 'Principia' added a new theory of relations [Russell/Whitehead]
21698 Bar ancestors, relations of reducible [Quine]
10816 Mereology simulates relations quantification [Lewis]
8525 Relations are second-order from tropes [Campbell,K]
9926 Relations: set of sets, or set of sets of sets [Burgess/Rosen]
9561 Maths covers relations with ordered pairs [Chihara]

7. Predicates in Logic

assigning predicates to objects in formulae

3300 Subject-predicate, hence substance-properties [Aristotle]
3319 Predicates are functions, not properties [Frege]
6076 Predicates name functions which map objects [Frege]
18894 A predicate hierarchy, from generality to names [Sommers]
10615 Comprehension: conditional properties [Smith,P]
15651 Using 'true', replace properties with truths [Halbach]

8. Theories in Logic

complete sets of propositions derived from some start

16891 Perhaps truths can be ordered epistemically [Frege]
16906 The simples are the essence of arithmetic [Frege]
16865 'Theorems' are both proved, and used in proofs [Frege]
17807 Study whole systems, not just components [Curry]
10595 A 'theorem' is a sentence derived from axioms [Smith,P]
14620 Theories: maximal sentences, or axiom system [Fine,K]
10973 Theories have infinite premisses [Read]
15328 Non-conservative theories allow new proofs [Horsten]
16310 Theories are formulae plus consequences [Halbach]

F. Referring in Logic

1. Naming

making unique reference to some object

a. Names

13777 A name is a sort of tool [Plato]
13790 Name-givers can make mistakes [Plato]
13791 Names can't give us knowledge of things [Plato]
12974 Understand things to understand names [Leibniz]
10427 Names are of something, even if imaginary [Mill]
18772 We can treat designating descriptions as names [Frege]
8447 'Etna' can't refer to the whole of actual Etna [Frege]
6102 You must know the application to know a name [Russell]
10423 Several criteria fix logically proper names [Russell]
9364 Names must fit our experience [Lewis,CI]
18727 A person's name doesn't mean their body [Wittgenstein]
4139 Names prepare for descriptions [Wittgenstein]
8453 Existence claims don't require naming [Quine]
10788 Proper names are key for nominalists [Marcus (Barcan)]
10786 A 'name' is whatever refers [Marcus (Barcan)]
17505 Conditions are needed for proper names [Putnam]
10437 Names are rigid, unlike definite descriptions [Kripke]
4949 Names are rigid across possible worlds [Kripke]
14650 Maybe proper names involve essentialism [Plantinga]
9038 Name denotation, and speaker denotation [Evans]
5824 How do phrases name, if they change referent? [Evans]
9042 Intentions for naming must be public [Evans]
13360 Names are what pick out single objects [Bostock]
3005 Reference can be to two properties of a thing [Fodor]
12648 Names pull up persons in the mind [Fodor]
12650 'Paderewski' has two names in mentalese [Fodor]
13402 We must know names despite changes [Jubien]
13405 Fixing bearer and category of names differ [Jubien]
12876 Individuals are just those with names [Simons]
13134 We negate predicates, but not names [Westerhoff]
18935 When is an act of naming successful? [Sawyer]

b. Names as descriptive

14075 Modal names refer to their usual sense [Frege]
10424 If sense fixes an object, it's a proper name [Frege]
18773 'Aristotle' has a variety of senses [Frege]
8448 Objects can have multiple names (and senses) [Frege]
10999 Names need a means of reidentification [Bradley]
4945 Names are definite descriptions not denotation [Russell]
18942 Names contribute property sets, not objects [Russell]
18941 Names describe, and lack a sense [Russell]
7745 Names can't always become descriptions [McCullogh]
5386 Proper names are really descriptions [Russell]
7744 Quantifiers explain descriptions and names [Russell]
10450 Names can be used as descriptions [Russell]
14457 'This' and 'that' are the only real names [Russell]
14458 'Homer' is an abbreviated description [Russell]
4946 Names are fixed by families of descriptions [Wittgenstein]
10925 Only pure reference can be substituted [Quine]
21878 Names have a subjective aspect [Derrida]
21889 'I' is denotation without description [Derrida]
9182 Ancient reference is a matter of tradition [Dummett]
4951 Bundle of qualities is abstract not particular [Kripke]
17031 Names can refer with all descriptions false [Kripke]
9175 We fix rigid names using descriptions [Kripke]
7746 Names have no sense (or definition) [Searle]
7747 Names can't refer if they lack a sense [Searle]
7748 There is more to 'Aristotle' than a baptism [Searle]
7749 Proper names need descriptions to refer [Searle]
7750 Names have loose logical links to features [Searle]
5829 False descriptions don't prevent reference [Schwartz,SP]
5830 To name, some descriptions must be right [Schwartz,SP]
10452 Proper names can even be predicates [Bach]
15599 Do twin name pairs differ in relationship? [Fine,K]
16216 Names include an identity criterion [Hawley]
9455 Maybe names have category content [Bealer]
c. Names as referential
13789 Knowing the name is knowing the thing [Plato]
4944 Names denote, but don't connote [Mill]
7762 Proper names just mean their objects [Mill]
4978 A name's meaning is the object itself [Frege]
15159 Logically proper names mean the referent [Russell]

10449 Logically proper names introduce objects [Russell]
6410 Most names are really definite descriptions [Russell]
10823 Names denote if objects satisfy [Tarski]
7089 Names are primitives that mean objects [Wittgenstein]
21879 The bond of name and thing is obscure [Derrida]
8957 Some references must be descriptive [Kripke]
10428 If not descriptive, names must have referents [Kripke]
4959 Name references are fixed by properties [Kripke]
9171 The function of names is simply to refer [Kripke]
16982 A man could acquire the same name twice! [Kripke]
9041 Names aren't causal if they change denotation [Evans]
16405 To know a name, spot the referent? [Stalnaker]
10456 Millian names have at least four problems [Bach]
13399 Names are not rigid designators [Jubien]
7306 Reference won't explain bearerless names [Miller,A]
21653 Speakers refer, so names don't [Hofweber]
18945 Millian names just mean their object [Sawyer]

d. Singular terms

10510 Frege attributes reference very broadly [Frege]
7757 'Nobody' is a quantifier, not a singular term [Russell]
2612 Russell reduced singular terms to predicates [Russell]
9868 Reference works if syntax and semantics right [Wright,C]
3137 A family of singular terms designates things [Rey]
7755 There are four types of singular term [Lycan]
10670 A 'singulariser' usefully converts plurals [Cartwright,H]
12230 Truth makes singular terms refer [Hale/Wright]
10312 Singular terms don't fix inferences [Hale]
10313 Some singular terms lack ontology [Hale]
10316 Usage decides genuine singular terms [Hale]
10322 Non-relative objects needs neutral language [Hale]
10001 Adjectives contribute to noun phrases [Hofweber]
21636 No 'singular terms' occur in linguistics [Hofweber]
21637 No entities in identities of processes [Hofweber]
16357 Singular terms match files in the mind [Recanati]

e. Empty names

18937 Grasp empty names via 'sense'? [Frege]
18940 Empty names are a weakness in languages [Frege]
18939 In logic all names must designate objects [Frege]
18943 Sentences with empty names are all false [Sawyer]
10426 To be a name, it must name something [Russell]
6439 Names always designate an object [Russell]
13361 It's only a name if it really refers [Bostock]
10429 Names only designate if the object exists [Sainsbury]
19001 'Pegasus doesn't exist' seems paradoxical [Yablo]
12446 Names can work with no objects [Azzouni]
18946 Reference to nonexistent is normal [Reimer]
18934 Good sentences can hold empty names [Sawyer]
18938 'Pegasus doesn't exist' is not T or F? [Sawyer]

f. Names eliminated

7311 Only 'this' and 'that' are proper names [Russell]
19321 Convert names into predicates? [Quine]
8455 Logic does not need names [Quine]
8456 Quine defined away names Russell-style [Quine]
9204 Quine shouldn't conflate name and description [Fine,K]
9016 Names can be turned into predicates [Quine]

2. Descriptions

referring to objects by their characteristics

a. Descriptions

14455 'A unicorn' is meaningless [Russell]
7760 Russell is attributive, Strawson referential [Donnellan]
10440 Description without reference is possible [Bach]
15158 Are indefinite descriptions quantificational? [Soames]

b. Definite descriptions

13733 Definite descriptions are singular terms [Frege]
6411 Descriptions can refer, and make fewer claims [Grayling]
10433 Definite descriptions can't be referring [Russell]
5385 'The so-and-so' is a definite description [Russell]
18779 'The' is for quantification, not denotation [Montague]
5811 Definite descriptions can be non-referential [Donnellan]
5812 Attributive/referential definite descriptions [Donnellan]
5814 'The x if F' only presumes that x exists [Donnellan]
13813 Definite descriptions don't always refer [Bostock]
13814 Definite descriptions can't be names [Bostock]
13816 Best to treat descriptions as quantifiers [Bostock]
13817 Definite descriptions can be names [Bostock]

13848 Scope for descriptions, not for names? [Bostock]
10444 Definite description won't intrinsically refer [Bach]
10425 Definite descriptions can fail to refer [Sainsbury]
10438 Descriptions are rigid in subject position [Sainsbury]
13398 Add 'actual' to rigidify a description [Jubien]
15414 Definite descriptions have flexible reference [Burgess]
18774 Definite descriptions have a logical structure [Linsky,B]
9454 There are 4 theories of definite descriptions [Bealer]
10671 Plural definite descriptions pick a class [Hossack]

c. Theory of definite descriptions

1608 Russell eliminates reference to non-beings [Russell]
7754 Russell solved four problems in one move [Russell]
21529 Russell reduced the ontology of logic [Russell]
6333 Reduce 'the' to terms of predicate logic [Russell]
6412 Is the baby unique in 'the baby is crying'? [Grayling]
7743 Quantifiers, not names, explain descriptions [Russell]
7310 Definite descriptions aren't proper names [Russell]
12006 Russell's theory blocked two problems [Russell]
4569 Descriptions concern properties, not reference [Russell]
21549 Description theory needs quantifier scope [Lackey]
12796 Russell's theory is of singulars only [Laycock]
11009 Russell gets truth of non-existence wrong [Read]
7532 Denoting is crucial for identifying classes [Russell]
11988 Russell's account has scope ambiguity [Kaplan]
1611 Names can be eliminated from language [Quine]
6413 'The King is bald' presupposes his existence [Strawson,P]
8354 When could 'King of France is wise' be true? [Strawson,P]
4568 A term can't refer just by its meaning [Cooper,DE]
11989 Eliminate contingent expressions [Kaplan]
13815 Russellian descriptions have scope problems [Bostock]
15157 'The man', quantifier, not singular term [Soames]
4098 The theory of descriptions is internalist [Crane]
7697 Is "The winged horse has wings" false? [Jacquette]
21727 You can't eliminate the Queen of England [Linsky,B]
18947 What if the described properties don't exist? [Sawyer]

3. Property (λ-)-Abstraction

device for referring to an expressed property

11863 (lambda-x)[Man x] is a property [Wiggins]
11176 Must a condition imply a property? [Fine,K]
11028 lambda-abstraction disambiguates [Fitting]
9725 'Predicate abstraction' gives extra scoping [Fitting/Mendelsohn]
13703 Is-cold-and-hungry as single predicate? [Sider]

G. Quantification

1. Quantification

general ideas about expressing quantities of objects

11149 Universal, particular or indeterminate [Aristotle]
9106 'Every' only signifies when added to a term [William of Ockham]
9950 A quantifier is a second-level predicate [Frege]
14137 Use 'any', not 'all', for infinite classes [Russell]
9467 Quantifiers are conjunction or disjunction? [Wittgenstein]
10926 Opaque reference produces nonsense [Quine]
10922 Opaque reference is quantification failure [Quine]
10311 Don't quantify into opaque contexts [Quine]
10538 Finite quantification can be eliminated [Quine]
9015 An existential quantifier defines a universal [Quine]
10799 Existential first-order, substitutional higher [Marcus (Barcan)]
19057 Quantify without knowing all instances? [Dummett]
15891 Quantifiers combine two assumptions [Harré]
13438 'Prenex normal form': quantifiers at start [Bostock]
6042 Quantifiers are overrated [McGinn]
6067 Quantifiers express quantity, not existence [McGinn]
6890 Quantifiers give sentences truth-values [Mautner]
18492 Not just objectual or substitutional... [Williamson]
11007 Quantifiers are second-order predicates [Read]
8452 Universal claims are nowadays conditionals [Orenstein]
16416 English and logic quantifiers are not the same [Hofweber]
21643 Quantifiers for truths, or for reality? [Hofweber]

2. Domain of Quantification

specifying the objects from which quantifiers select

17743 De Morgan introduced a 'universe of discourse' [De Morgan]
9991 For Frege the variable ranges over all objects [Frege]
10536 Frege's domain was open; now it is specified [Dummett]
9871 Frege neglected the domain of quantification [Dummett]

10656 Omit boundary elements from the domain [Whitehead]
10042 For-all may not be a universal conjunction [Gödel]
10790 Infinite objects need quantification [Marcus (Barcan)]
10791 No objects, just substitution places [Marcus (Barcan)]
18914 Can we quantify over events? [Davidson]
10776 'All' and 'Exist' make 'and' and 'or' infinite [Tharp]
10832 What is the range of universal claims? [Boolos]
13818 Empty domains mean empty names [Bostock]
17787 One big domain, or vary it with interpretation [Mayberry]
10007 Two uses of quantifiers can come apart [Hofweber]
13449 Free to quantify, but limited domain? [Rayo/Uzquiano]
13450 Is absolute generality impossible? E.g. sets? [Rayo/Uzquiano]

3. Objectual Quantification

universal and existential quantifiers picking objects

8079 Aristotelian logic has two quantifiers [Aristotle]
7742 Quantification needs 'everything' and 'not' [Frege]
7730 Frege introduced quantifiers for generality [Frege]
6061 Existential quantifiers express existence [Russell]
6069 Rename the 'existential' quantifier 'partial' [McGinn]
11115 Pick our horses, or horse-things? [Jubien]
13392 Philosophers over-simplify quantifiers [Jubien]
13506 ∀ can't refer to a universal set [Hart,WD]
8312 Quantify over 'something', not one 'thing' [Lowe]

4. Substitutional Quantification

quantifiers range over expressions instead of objects

9874 Substitutional 2nd-order quantifiers are bad [Dummett]
10800 Values of variables are mere expressions [Ryle]
10793 Quine has softened on substitutional quant. [Quine]
10801 Reference matters, or why replace it? [Quine]
21642 Substitutional quantification lacks ontology [Quine]
9025 Too few names for substitution quantification [Quine]
9026 Nameless objects a quantification problem [Quine]
10785 Is substitutional quantification nominalist? [Marcus (Barcan)]
10795 Substitutional language has no ontology [Marcus (Barcan)]
10798 Could a true universal sentence be refuted? [Marcus (Barcan)]
10009 Substitutional quantification is just Tarski [Wallace]
10792 Substitutional quantifiers aren't rivals [Kripke]
18123 Substitutional is normal if all is named [Bostock]
9469 Substitutional good for linguistic things [Parsons,C]
9468 Substitution: true if closed term t ensures Ft [Parsons,C]
15533 Treat fictions as being about names [Lewis]
9466 Substitutional quantification avoids objects [Jacquette]
9465 Substitutional: truth for terms of same type [Jacquette]
12222 We can quantify over expressions [Fine,K]
13674 Use truth and terms, not objects and models [Shapiro]
15136 Substitution quantification is a disjunction [Williamson]
8475 Sentence true is quantifier substitutable [Orenstein]
17988 Substitutional qn isn't the whole story [Hofweber]

5. Second-Order Quantification

quantifying over both objects, and features or sets of objects

10705 Quantified predicate makes them names [Quine]
9186 2nd-order adds properties,relations,functions [Dummett]
13671 2nd-order is ontologically just plurals [Boolos]
10569 Second-order can be misread as first-order [Fine,K]
10290 2nd-Order: properties,sets,relations,functions [Shapiro]
10175 Three types of variable in second-order logic [Reck/Price]
10978 2nd-order logic covers all properties [Read]
5740 Two additions lead to second-order logic [Melia]
18761 Second-order variables must be ambitious [McGee]
13453 Quantify over the concepts of objects? [Rayo/Uzquiano]
18763 2nd order variables are of subsets of things [Anderson,CA]

6. Plural Quantification

quantifiers pick out collections, not just 'one+' or 'all'

14236 No one concept for a team of horses [Oliver/Smiley]
12798 Plurals can be paraphrased away [Quine]
14235 'They can become a set' is a tautology [Cargile]
10267 Treat second-order quantification plurally [Boolos]
10698 Plural forms are only committed to objects [Boolos]
15731 Quantification commits to sets, or to plurals [Lewis]
15518 Do plurals connect to second-order logic? [Lewis]
15525 Plural quantification lacks axioms [Lewis]
10268 Are plural quantifiers just of classes? [Shapiro]
12845 Some languages lack plurals [Simons]
12794 Plurals are semantical, not ontological [Laycock]
10778 Second-order benefits, 1st-order ontology? [Linnebo]

10783 Plural quantification is not really logic [Linnebo]
10635 Plural and 2nd-order quantification differ [Linnebo]
10636 Plural plurals need a 1st-level ontology [Linnebo]
10639 Plural quantification allows austere 2nd-order [Linnebo]
10640 Tables are just some tablewise atoms [Linnebo]
10641 Eliminate plurals by quantifying over sets? [Linnebo]
14234 Without plural reference, you need sets [Oliver/Smiley]
14237 Use plurals for the domain of set theory [Oliver/Smiley]
10666 Complex facts without complex things [Hossack]
10669 Plural reference sometimes abbreviates [Hossack]
10675 A plural comprehension principle is acceptable [Hossack]
14232 Why formalise 'There are Fs' singularly? [Liggins]

7. Unorthodox Quantification

non-classical ways of referring to the quantity of objects

15878 Some quantifiers rule out any order [Harré]
10774 There are at least five unorthodox quantifiers [Tharp]
7806 Boolos invented plural quantification [Boolos]
15534 Quantify over incompatible properties? [Lewis]
15156 Two main quantifiers just suit maths [Soames]
6068 We need a new Intentional Quantifier [McGinn]
15138 Quantification:objectual,substitutional,etc [Williamson]
8711 The universal quantifier concerns checkability [Friend]
18771 ∃ as 'there is...' and skip 'exists'? [Anderson,CA]

H. Proof Systems

1. Proof Systems

general ideas about the different proof systems

13824 Frege founded proof theory [Frege]
15089 Proof just clarifies tautologies [Wittgenstein]
13801 Informal proof uses English and obvious steps [Bostock]
15406 Induction or Recursion on complexity [Burgess]

2. Axiomatic Proof

proofs built up from some initially accepted truths

13609 Frege's axioms now see unnatural [Frege]
13619 Two more axioms for quantification [Bostock]
13622 At least nine axiom systems for basic logic [Bostock]
13687 No conditional or reductio with axioms [Sider]
13688 Good axioms should be indisputable [Sider]
12198 Nowadays we use rules, not axioms [Rumfit]

3. Proof from Assumptions

proofs which add assumptions to axioms and rules

13615 Conditionalising gives the Deduction Theorem [Bostock]
13616 The Deduction Theorem simplifies proofs [Bostock]
13620 Assumption proofs will reduce to Axioms [Bostock]
13621 Some theorems will 'discharge' assumptions [Bostock]
13690 Induction 'on the length' is deconstruction [Sider]
13691 Induction: base case,then hypothesis,then step [Sider]
10703 Supposed axioms give conditional truth [Potter]

4. Natural Deduction

proofs built from introduction and elimination rules

13832 Natural deduction is the heart of logic [Gentzen]
13753 Assumptions are basic; skip axioms [Bostock]
13754 Two rules deal with \wedge and \vee and \exists [Bostock]
13755 We can introduce and eliminate negation [Bostock]
13758 A natural deduction proof meets in the middle [Bostock]
18120 Natural deduction rests on Deduction Theorem [Bostock]
13823 Use atomic steps, and a single constant [Prawitz]
10602 A 'natural deduction system' has no axioms [Smith,P]
21612 Arg by Cases gets C from 'A or B' [Williamson]
19298 Natural deduction isn't tied down, like axioms [Hale]
18783 No natural deduction for many-valued logics [Mares]
13685 Natural deduction allows assumptions [Sider]
15001 'Tonk' won't fit natural deduction [Sider]
18800 Conditions introduce, deductions eliminate [Rumfitt]

5. Tableau Proof

proof by eliminating branches on inference trees

13611 Tableau proof is based on reductio [Bostock]
13612 Some rules branch; closing is the aim [Bostock]
13613 Open branches give verifying models [Bostock]
13756 Modus Ponens spreads a tree too much [Bostock]
13757 Semantic tableaux have proof recipes [Bostock]
13761 In tableau, only the end establishes anything [Bostock]
13762 Tableau rules eliminate and shorten [Bostock]
7790 Truth trees provide good counterexamples [Girle]

6. Sequent Calculi

proof where every step is a proof and not just a formula

13759 Sequent calculus lines are conclusions [Bostock]
13760 Sequent calculi are good for comparisons [Bostock]
15425 Proofs without transitivity are allowed [Burgess]
15426 One big sequence, instead of a chain [Burgess]
13686 Build proofs entirely from conclusions [Sider]

I. Semantics of Logic

1. Semantics of Logic

logic when interpreted, rather than mere formal systems

18756 Compositional semantics, using satisfaction [Tarski]
19313 Tarski invented predicate logic semantics [Tarski]
13335 Semantics studies language-to-world [Tarski]
13336 Semantics must be in a second language [Tarski]
19059 Replace 'true' and 'false' with 0 and 1? [Dummett]
19063 Beth trees show intuitionistic semantics [Dummett]
19062 Two-valued semantics implies truth-conditions [Dummett]
3810 Validity is semantic, not syntactical [Searle]
13364 Assign objects to names, or to variables? [Bostock]
10284 There are three semantics approaches [Hodges,W]
10283 Wffs need an 'interpretation' and 'valuation' [Hodges,W]
10285 $I \models \phi$ means ϕ is true in I [Hodges,W]
10016 Logical interpretation won't give 'sense' [Hodes]
10570 Interpretations are a technical convenience [Fine,K]
6653 Syntactical and semantic view of deduction [Lowe]
10898 Semantics depends on instantiations [Zalabardo]
10902 Examine semantics, or build it [Zalabardo]
18792 Information is a situation is basic [Mares]
13697 Assign truths relative to the variables [Sider]
18753 Secure semantics for predicate logic uses sets [McGee]
15349 Truth gaps perhaps, but not gluts [Horsten]

2. Formal Truth

role of truth in various systems of formal logic

5542 The rules of logic must include truth [Kant]
10620 Truth was originally rejected [Gödel]
10613 Nice theories can't define their own truth [Smith,P]
10819 Tarski's truth works for model-building [Field,H]
9375 Conventionalism doesn't deny truth in logic [Boghossian]
10892 T and F only need to differ [Zalabardo]

3. Logical Truth

statements held to be true because of a logic system

16884 Basic truths are known when understood [Frege]
18273 Logical truths are extreme generalities [Russell]
13830 Logical truths are by-products of the rules [Wittgenstein]
9027 Grammatical structure decides logical truth [Quine]
18955 Having a valid form doesn't ensure truth [Putnam]
9187 Logic of syntax, and logic of truth [Dummett]
15091 Restrict 'logical truth' to formal logic [Shoemaker]
9721 Tautologies are implied by the null set [Enderton]
10049 Logical truths may contain non-logical notions [Musgrave]
10050 True in all interpretations is logically true [Musgrave]
9771 Valid vague logic is the core of language [Fine,K]
11174 Logical truth is caused by the concepts [Fine,K]
15408 Tautologies are valid sentential formulas [Burgess]
10895 'Logically true' is always true [Zalabardo]
10900 Logical truth is true in all structures [Zalabardo]
10971 Logical truth is conclusion without premisses [Read]
13684 Logical truth is semantic validity? [Sider]
13704 Modal logical truths are uncertain [Sider]
10696 Logical truths follow from empty premises [Beall/Restall]
13236 Logicism makes logical truth important [Beall/Restall]
18754 Logical truth: analytic because of connectives [McGee]
14245 Logical truth can't require any existence [Oliver/Smiley]
18809 Logical truths are by-products of the rules [Rumfitt]

4. Satisfaction

evaluating as True after all truth assignments are made

13339 Satisfaction is assertability when closed [Tarski]
13340 Best to start semantics with satisfaction [Tarski]
19140 Satisfaction: a generalised form of reference [Davidson]
9994 'Satisfaction' is evaluation arriving at True [Enderton]
10474 \models says 'is a model for' or 'satisfies' [Hodges,W]
19317 Satisfaction is property possession [Kirkham]
15418 Valid/demonstrable like satisfiable/consistent [Burgess]
13633 'Satisfaction' is a function to T,F [Shapiro]

10235 A sentence is 'satisfiable' if it has a model [Shapiro]
10894 'Satisfaction' is one good truth-assignment [Zalabardo]
10901 Satisfies needs a structure and interpretation [Zalabardo]
15366 Satisfaction is primitive and paradoxical [Horsten]

5. Extensionalism

semantic system built on reference to objects

13606 Extensional logic has Humean metaphysics [Ellis]
13821 Ordinary logic has extensionality built in [Bostock]
13362 An object's two names can be swapped [Bostock]
9458 Extensionalists assume objects exist [Jacquette]
21719 Truths apply to all coextensive functions [Linsky,B]

6. Intensionalism

semantic system built on reference to properties

9462 Frege is intensionalist about reference [Frege]
18936 Adding 'senses' made Frege an intensionalist [Frege]
14203 Examples show intension isn't meaning [Putnam]
9461 Possession of properties fixes meaning [Jacquette]

J. Model Theory in Logic

1. Logical Models

general features of logical models

16323 Model theory needs a metalanguage [Tarski]
13343 Models are objects satisfying functions [Tarski]
10473 Model theory studies language interpretation [Hodges,W]
10475 'Structures' show objects and domains [Hodges,W]
10481 Models as structures, or as descriptions [Hodges,W]
13826 Models handle validity, but how to know it? [Prawitz]
10827 Models restrict domains of quantification [Field,H]
9968 Fundamental models have concrete objects [Jubien]
13505 We model sentences using set theory [Hart,WD]
13511 Model theory is mostly first-order [Hart,WD]
13513 Models are first-order ways for worlds [Hart,WD]
13512 Modern model theory began in 1962 [Hart,WD]
15411 All models can be expressed mathematically [Burgess]
15412 Models concern truth values, not meaning [Burgess]
15416 Make technical and intuitive truth match [Burgess]
13644 Semantics for models uses set-theory [Shapiro]
10240 Models are of relations, reference, extensions [Shapiro]
10239 'Satisfaction' is central to model theory [Shapiro]
10903 Structures 'model' by making true [Zalabardo]
13724 Truth, then validity, then consequence [Sider]
10129 A 'model' is when the axioms are all true [George/Velleman]
5741 Validity is defined in terms of models [Melia]
19207 Map truth-values, or objects and sets [Merricks]
10158 A 'model' is when the axioms are true [Feferman/Feferman]
10162 Structures have equivalence relations [Feferman/Feferman]
10693 Models are interpretations of structures [Beall/Restall]
13519 Models use sets to show proofs match truth [Wolf,RS]
13531 Model theory shows structure in maths [Wolf,RS]
13532 Model structures have four ingredients [Wolf,RS]
13533 1st-order models rest on three theorems [Wolf,RS]
18694 If there is one model, there are lots of them [Button]
10756 A model is a domain, and an interpretation [Rossberg]
18744 Models: sets with functions, relations, truth [Horsten/Pettigrew]
17747 'Models' make all the theorems come out true [Walicki]

2. Isomorphisms

ways in which two models or theories map together

14207 Isomorphic models imply language shifts [Putnam]
14212 Consistent theories have heaps of models [Lewis]
10079 A 'bijective' function is totally one-to-one [Smith,P]
10078 'Injective'/1-to-1' functions output uniquely [Smith,P]
10077 'Surjective/onto' functions create the lot [Smith,P]
13636 'Categoricity' when all axiom models coincide [Shapiro]
13670 Categoricity is beyond 1st-order languages [Shapiro]
10214 Ontology can only be 'up to isomorphism' [Shapiro]
10238 The set hierarchy has maximum models [Shapiro]
10105 Treat isomorphic structures as identical? [George/Velleman]
13537 Isomorphism is structure-preserving bijection [Wolf,RS]
10884 Unique to isomorphism is 'categorical' [Horsten]
10758 If models converge, a theory is 'categorical' [Rossberg]

3. Löwenheim-Skolem Theorems

group of theorems about models involving infinities

17878 The denumerably infinite satisfies all [Skolem]
9913 Löwenheim-Skolem a problem for language [Putnam]
10773 Löwenheim-Skolem limits distinctions [Tharp]

10777 Cantor's conceptions are illusory? [Tharp]
13843 Any logic needs Löwenheim-Skolem [Hacking]
10289 Infinite models, then large models [Hodges,W]
10288 Consistent theory, then countable model [Hodges,W]
17813 L-S says numbers model any true theory [White,NP]
17790 No L-S logic can axiomatise analysis [Mayberry]
13648 Löwenheim-Skolem: too many models! [Shapiro]
13658 Down L-S: countable sets - countable models [Shapiro]
13659 Up L-S: infinite models are all sizes [Shapiro]
13675 Substitutional semantics remains finite [Shapiro]
10234 If one infinite model, then they're infinite [Shapiro]
10590 Up L-S: if numbers satisfy so does infinite [Shapiro]
10292 If infinite model, then countable model [Shapiro]
10296 Löwenheim-Skolem Theorems fail in 2nd-order [Shapiro]
10297 Löwenheim-Skolem a defect in first-order logic [Shapiro]
10988 First-order theories of sets are inadequate [Read]
10160 If sentences countable, so is the model [Feferman/Feferman]
10159 Löwenheim-Skolem, then 1st-order completeness [Feferman/Feferman]
13539 The LST seriously limits first-order logic [Wolf,RS]
17929 Skolem generalised Löwenheim's result [Colyvan]
17748 Theories of natural numbers say everything? [Walicki]

K. Features of Logics

1. Axiomatisation

giving basic truths from which some system is deduced

13004 Axioms are assumptions to prove [Aristotle]
13002 Reducing axioms is always good [Leibniz]
17624 Grasp the power and priority of the axioms [Frege]
16886 Axioms must be independently knowable [Frege]
16866 Trace inference backwards, to the axioms [Frege]
16868 The essence of maths is a kernel of primitives [Frege]
16871 Being an axiom is relative to a system [Frege]
16870 Axioms are undoubted and unproved [Frege]
17963 The facts arrange themselves in theories [Hilbert]
17966 Axioms need clear dependence and consistency [Hilbert]
17630 Proof sources are reasons for belief [Russell]
17629 Ultimate premises are relative [Russell]
17640 Finding axioms gives new results [Russell]
6109 Conclusions may be clearer than the axioms [Russell]
17886 Incompleteness proved limits for axioms [Gödel]
19292 All logic propositions have equal status [Wittgenstein]
19632 Madness and axioms have equal weight [Cioran]
17606 Axioms show how different areas relate [Kline]
17622 Seeing grounding leads to belief [Burge]
17778 Axioms rely on isomorphic sameness [Mayberry]
17779 'Classificatory' axioms reveal morphology [Mayberry]
17780 Axioms can 'eliminate' abstract objects [Mayberry]
13416 Maths needs axiom, treated as true [Tait]
17605 Geometry and real numbers now had axioms [Maddy]
17625 Coinciding theories imply a single depth [Maddy]
9649 Axioms: self-evident, stipulated or fallible? [Brown,JR]
17930 'Categorical' axioms have isomorphism [Colyvan]
17761 Axiomatisation allows an overview [Walicki]
17763 Axiomatic systems are purely syntactic [Walicki]

2. Consistency

a set of sentences are held to be simultaneously true

10071 A nice theory can't prove its own consistency [Gödel]
13341 We can use truth to prove consistency [Tarski]
13540 'consistent' if never all true together [Bostock]
13541 Negation-consistent can't prove p and \neg p [Bostock]
13542 Absolutely consistent: \neg (S) $\&$ ϕ ; can fail [Bostock]
12656 Consistency doesn't come from its parts [Fodor]
9552 Consistency by truth, or by non-contradiction [Chihara]
18785 Consistency semantic, non-contradiction syntax [Mares]
10119 Consistency is a purely syntactic property [George/Velleman]
10126 Not P and \neg P in a 'consistent' theory [George/Velleman]

3. Soundness

whether all formal deductions always lead to truth

19123 'Reflection principles' can assert soundness [Gödel]
9719 Proof is 'sound' when proof entails truth [Enderton]
10765 Soundness seems essential to proof-procedures [Tharp]
10070 If all provables are true, it is 'sound' [Smith,P]
10086 Soundness: good axioms, good proofs [Smith,P]
10596 A theory is 'sound' iff every theorem is true [Smith,P]
13635 'Weakly' sound: theorems are logical truths [Shapiro]

10120 Soundness is a semantic notion [George/Velleman]
18757 Soundness theorems tend to be circular [McGee]
16342 PA can't say it is true as it lacks 'true' [Halbach]
16341 Only endorse sound theories, presumably [Halbach]
16344 Soundness must involve truth [Halbach]

4. Completeness

all the truths of a system are formally deducible

9544 Systems are 'weakly' or 'strongly' complete [Hughes/Cresswell]
19065 Completeness proofs test a theory of meaning [Dummett]
9720 Proof is 'complete' if truth entails proof [Enderton]
10763 Completeness and compactness, then axioms [Tharp]
10834 There are strong and weak completeness [Bools]
10069 'Complete' means all sentences are provable [Smith,P]
10598 'Negation complete' decides every sentence [Smith,P]
10597 'Complete' applies to both logics and theories [Smith,P]
13628 We don't need completeness [Shapiro]
13698 Models give proofs in a complete logic [Sider]
10127 A 'complete' theory contains either P or \neg P [George/Velleman]
10161 If P holds in every model, it is derivable [Feferman/Feferman]
13538 A complete theory is maximum strength [Wolf,RS]
10761 Cuning models can give completeness [Rossberg]

5. Incompleteness

some truths of a system evade formal proof

19391 Every existing object can be numbered [Leibniz]
17883 Gödel did not refute Hilbert's optimism [Gödel]
17888 Decide sentences by moving 'higher' [Gödel]
10621 Gödel 1 kills logicism, 2 kills Hilbert [Smith,P]
10770 If incomplete, formulas can't be listed [Tharp]
10609 There are two routes to Incompleteness [Smith,P]
17894 Nothing seems absolutely undecidable [Koellner]
15353 Consistency doesn't entail soundness [Horsten]
10755 Semantics are needed for incompleteness [Rossberg]
13852 Derive all instances, but not universality? [Engelbreten/Sayward]

6. Compactness

satisfaction by satisfying the finite subsets

9995 Finite proof suffices for infinite proof [Enderton]
10772 Compactness is restricting and unorthodox [Tharp]
10771 Infinite axioms make compactness important [Tharp]
13841 Is compactness definitive of logic? [Bools]
13544 Inconsistency or entailment have finite base [Bostock]
13618 Compactness: infinity adds nothing new [Bostock]
10287 If it's entailed, and finite subset will do it [Hodges,W]
13496 Consequences are always of a finite subset [Hart,WD]
17789 A compact logic can axiomatise arithmetic [Mayberry]
13630 Non-compactness is a strength 2nd-order [Shapiro]
13646 Completeness implies compactness [Shapiro]
10974 Compactness: consequence from finite subset [Read]
10975 Compact theories can have infinite premisses [Read]
10976 Compactness controls but limits [Read]
10977 Compactness blocks infinite proofs [Read]
13699 Compactness: no contradictions at infinity [Sider]
17867 Compact means finitely understandable [Almog]

7. Decidability

are positive or negative answers always possible?

18758 Church showed logic is undecidable [Church]
9996 'Decidable' means inclusion is provable [Enderton]
10080 'Effective' has six criteria [Smith,P]
10087 'Decidable' means all sentences are provable [Smith,P]
10088 Most complete theories are decidable [Smith,P]
10156 'Recursion theory' concerns solvability [Feferman/Feferman]
10155 Peano Arithmetic is undecidable [Feferman/Feferman]

8. Enumerability

whether all formulae in a system can be specified

10082 Some infinite sets are not enumerable [Cantor]
10038 Logics must survey all possible expressions [Gödel]
9997 The wff's can always be enumerated [Enderton]
10764 Completeness implies effective enumeration [Tharp]
10768 Effective enumeration won't ensure knowledge [Tharp]
10081 'Enumerable' means outputable from numbers [Smith,P]
10083 Set 'effectively enumerable' if fully listable [Smith,P]
10084 Finite sets are largely effectively enumerable [Smith,P]
10085 The ordered pairs of numbers is enumerable [Smith,P]
10601 Arithmetic theorems expressible but not truths [Smith,P]

9. Expressibility

limits of what can be said in a logical language

- 16000 'Expressible' is language; 'captured' is axioms [Smith,P]
13661 Semantically effective: logic truths recursive [Shapiro]

10. Monotonicity

if something is proved, nothing new can unprove it

- 4810 Deduction remains valid with added premises [Psillos]
14096 Explanations fail to be monotonic [Rosen]
13525 Most deduction is 'monotonic' [Wolf,RS]
19110 |= is normally defined as monotonic [Antonelli]
19112 Have the new premises been proved? [Antonelli]
18807 Monotonicity means there is a guarantee [Rumfitt]

L. Paradox

1. Paradox

general ideas about meeting contradictions in thought

- 6007 You can know and not know the same person [Eubulides]
13334 Paradoxes are logical, or linguistic [Ramsey]
13373 There aren't two groups of paradoxes [Priest,G]
16347 Many new paradoxes may await us [Halbach]
6516 Give up a choice if a rival is eliminated? [PG]

2. Aporiai

conflicts of thought that baffled and provoked the Greeks

- 11259 Enquiry presupposes knowledge [Plato]
11261 Puzzles are equality of reasoning [Aristotle]
11258 All progress starts with puzzles [Aristotle]
11262 One science of explanation or many? [Aristotle]
11263 Are ultimate and basic two sciences? [Aristotle]
11264 A science for each type of being? [Aristotle]
11265 Should metaphysics stick to pure being? [Aristotle]
11266 Do only sense-perceptibles exist? [Aristotle]
11267 Is category basic, or components? [Aristotle]
11268 General or specific kind the key? [Aristotle]
11269 Just particulars, or general kinds? [Aristotle]
11270 One principle or one kind of principle? [Aristotle]
11271 Perishables and imperishables different? [Aristotle]
11272 Do being and unity self-subsist? [Aristotle]
11273 Independent mathematical, or in things? [Aristotle]
11274 Kinds, as well as things and mathematical? [Aristotle]
11275 Basic causes actual, or potential? [Aristotle]
11276 Are universals or particulars basic? [Aristotle]
19581 Problems are lumps the mind must break up [Novalis]
21838 Before solutions, invent the problems [Deleuze]
13931 Aporiai allow wide views as starting points [Haslanger]

3. Antinomies

major clashes in our understanding in Kantian thought

- 13986 Antinomies of ideas, space, time and relations [Plato]
14150 'Parmenides' collects antinomies [Russell]
21454 In antinomies, attackers win, defenders lose [Kant]
15628 Contradiction is intrinsic to understanding [Hegel]
15629 Antinomies are in us, not in the world [Hegel]
15630 Everything is filled with antinomies! [Hegel]
17626 Advance meets completion in the transfinite [Zermelo]
21691 Antinomies contradict accepted reasoning [Quine]
9125 Deny or succumb to problems, they persist [Sorensen]

4. Paradoxes in Logic

conflicts that arise in precise reasoning or mathematics

a. Achilles paradox

- 5109 Fast runners must reach a slow runner's start [Zeno of Elea]
1507 If motion is infinitely divisible, so is time [Aristotle]
7557 The whole can't have more terms than the parts [Russell]
14149 The problem is 1-1 correlations of infinities [Russell]
21585 Infinite instants don't make a long time [Russell]
21690 The pursued runner has always moved on [Quine]
8075 Zeno covers atomic and divisible space/time [Devlin]
4229 Where can infinite tasks come to an end? [Lowe]
20457 No infinite whole from an infinity of parts [Rovelli]

b. König's paradox

- 13368 'Least indefinable ordinal' is thus defined! [Priest,G]

c. Berry's paradox

- 18125 The least number not named by this name? [Bostock]
13484 Berry: 'can't refer to n' refers to n [Hart,WD]
9638 Naming vast numbers can be paradoxical [Brown,JR]
13370 Number definable in less than 19 words? [Priest,G]

d. Richard's paradox

- 21565 Richard uses 'definition', which is undefinable [Russell]
13369 Define a real that isn't a definable real! [Priest,G]

e. The Lottery paradox

- 6368 If I won't win the lottery, no one will [Kyburg]
4261 Lottery Paradox says it probably won't be won [Bonjour]

5. Paradoxes in Set Theory

conflicts in the logic of sets of things

a. Set theory paradoxes

- 18062 Set-theory paradoxes are no real problem [Gödel]
9003 Set theory hates infinity, and loathes paradox [Quine]
9932 The paradoxes are not very important [Burgess/Rosen]
8675 Solve paradox by using 'classes' [Friend]

b. Cantor's paradox

- 13483 Cantor: powerset of the universe? [Cantor]
21554 All the sets must exceed all the sets [Lackey]

c. Burali-Forti's paradox

- 15895 The Burali-Forti was actually Russell's [Russell]
21553 The ordinal total exceeds itself? [Lackey]
13482 Burali-Forti is a crisis for Cantor's ordinals [Hart,WD]
13366 Is the next biggest ordinal an ordinal? [Priest,G]
8674 Is the set of all ordinals an ordinal? [Friend]

d. Russell's paradox

- 13365 Russell's is Cantor's stripped-down [Priest,G]
10711 Russell: not all properties collectivize [Potter]
6407 Classes lacking self-membership are odd [Russell]
21689 Does a shaver of non-self-shavers self-shave? [Quine]
21694 Member or non-member? creates paradox [Quine]
7701 Can a barber shave all the non-shavers? [Jacquette]
10673 Plural language avoids self-ref paradox [Hossack]

e. Mirimanoff's paradox

- 8710 Can a powerset be greater than itself? [Cantor]
13367 Is the next set in the hierarchy, or not? [Priest,G]

6. Paradoxes in Language

conflicts that arise out of things people say

a. The Liar paradox

- 6006 Saying truly you are lying is lying [Eubulides]
9464 Cretans always lie, said a Cretan [Anon (Titus)]
21564 Vicious Circle: don't involve All in All! [Russell]
21567 The Liar needs assertions of a single type [Russell]
8940 The Liar is impossible with Tarski's truth [Tarski]
19187 The Liar matters: we assert a falsehood [Tarski]
6569 This proposition is false; what proposition? [Wittgenstein]
21692 Try "this sentence is false" is false' [Quine]
14964 Using propositions won't solve the Liar [Gupta]
14969 Liar not T or F hits the Strengthened Liar [Gupta]
13507 The Liar seems inescapable [Hart,WD]
9138 Without self-reference the Liar is possible [Yablo]
15428 Is the Liar truth-value gap, or glut? [Burgess]
13372 Liar, and also Liar Pairs, and Liar Chains [Priest,G]
13371 An unknown sentence is thereby known [Priest,G]
11014 Self-reference with falsity is the problem [Read]
9137 You can't just ban self-reference [Sorensen]
15355 This sentence is not true in any context [Horsten]
16336 The Liar needs negation, or a conditional [Halbach]

b. The Heap paradox ('Sorites')

- 1512 Members may lack the features of the group [Aristotle]
6008 A heap of sand can't be destroyed [Eubulides]
8194 No one grain could create a heap [Dummett]
17583 There are no heaps [Inwagen]
9117 The smallest heap has four objects [Hart,WD]
21599 Opposed sorites bring a halt [Williamson]

c. Grelling's paradox

- 16475 'Heterological' is a contradictory predicate [Russell]
10631 Self-reference of 'heterological' is paradoxical [Hale/Wright]

d. The Preface paradox

- 13237 A preface can affirm and deny the book [Beall/Restall]

7. Paradoxes of Time

contradiction is the precise analysis of time

- 1508 Time is not a succession of nows [Aristotle]
1902 Socrates died when alive or when dead! [Sext. Empiricus]

6. Mathematics

A. Nature of Mathematics

1. Mathematics

discovered or invented, within or outside nature

- 12377 Mathematics is concerned with forms [Aristotle]
560 Mathematical precision is non-physical [Aristotle]
9076 Maths is imperceptible, but of the perceptible [Aristotle]
2252 Surely maths is true even in dreams? [Descartes]
2430 We learn time and number from our own minds [Descartes]
17185 Maths handles essences and properties [Spinoza]
16918 Mathematics can't just be concept analysis [Kant]
12427 All maths is based on whole numbers [Kronecker]
15910 The 'transfinite' between finite and Absolute [Cantor]
16869 Maths needs a complete inferential system [Frege]
8717 Hilbert sought total consistency in maths [Hilbert]
12456 I seek certainty in mathematics [Hilbert]
12461 All mathematical problems are solvable [Hilbert]
10059 Mathematics is founded on ignorance [Russell]
18119 Maths doesn't use language [Brouwer]
10132 Maths can't have a consistent basis [Gödel]
18281 Maths is nothing but algorithms [Wittgenstein]
9935 Mathematical truth is hopelessly compromised [Benacerraf]
9812 If a maths problem is statable it's soluble [Badiou]
6298 Maths is based on idealisations [Kitcher]
12392 A priori by concepts, construction or reality [Kitcher]
18078 Beauty in maths increases understanding [Kitcher]
12426 Aesthetics in maths is explanatory [Kitcher]
9226 Conflicting theories about different things? [Field,H]
6304 Maths exists, and is true independent of proof [Resnik]
10201 Maths largely reduces to set theory [Shapiro]
9604 Maths is the only certainty we have [Brown,JR]
4240 Should maths aim at truth? [Lowe]
10880 Pure, real or applied mathematics [Clegg]
15907 Maths studies structure, not quantity [Lavine]

2. Geometry

study of relationships of lines, points, and shapes

- 1553 Circles don't touch rulers at a point [Protagoras]
8726 Geometry leads upwards to philosophy [Plato]
9867 Can circles be understood but not recognised? [Plato]
9790 Geometry concerns nature, but not as it is [Aristotle]
12372 Lines are essential to triangles [Aristotle]
6297 Descartes made synthetic geometry analytic [Euclid]
17197 Truths of a triangle are part of its essence [Spinoza]
17222 A triangle's nature implies 180° [Spinoza]
18079 Newton devised kinematic geometry [Newton]
13163 A bounded circle cannot be infinite [Leibniz]
13008 Geometry shows eternal necessary truths [Leibniz]
8739 A priori spatial perception is Euclidean [Kant]
16930 Geometry non-analytic; it's based on qualities [Kant]
16919 Geometry rests on our intuition of space [Kant]
8740 Intuitions give meaning to geometry [Kant]
16899 Geometry is schemas based on particulars [Kant]
9618 Bolzano reduces geometry to arithmetic [Bolzano]
10245 All geometries are equally true [Poincaré]
13472 Hilbert eliminated number from geometry [Hilbert]
14151 Pure geometry is neutral about ontology [Russell]
14152 Ensure geometry has true premisses? [Russell]
14153 Get geometry premisses with work in practice [Russell]
14154 Geometry doesn't reveal actual space [Russell]
14155 Descriptive, Metrical and Projective geometry [Russell]
14442 Intersecting lines with no common point? [Russell]
8994 Analytic geometry can be logicist [Quine]
16949 Characterise geometry by transformations? [Quine]
16901 Spatial concepts are essential to geometry [Burge]
9159 Geometry as algebra loses something [Burge]
3332 Proportion links geometry & arithmetic [Benardete,JA]
21444 Geometry is now either formal or empirical [Gardner]

3. Nature of Numbers

nature and variety of the numbers

a. Numbers

- 1729 Denial of continuity gives us number [Aristotle]
13273 Magnitudes are continuous, pluralities aren't [Aristotle]
10958 Are numbers substances? [Aristotle]

13152 'Innumerable number' makes sense [Newton]
16920 Numbers are from adding units in time [Kant]
9823 We create numbers, to make distinctions [Dedekind]
13412 Numbers need rules, not abstractions [Benacerraf]
13413 We know lots of numbers, new ones [Benacerraf]
9901 Numbers are not sets [Benacerraf]
9912 There are no such things as numbers [Benacerraf]
12334 No single definition of number is available [Badiou]
12335 Three criteria for numbers [Badiou]
10599 Primes can be captured in logic [Smith,P]
10027 Mathematics is higher-order modal logic [Hodes]
13861 Essential nature of numbers? How known? [Wright,C]
8958 Space-time points can replace real numbers [Field,H]
8865 What does 'the number is increasing' mean? [Yablo]
9923 Just talk of possible existence of numbers [Burgess/Rosen]
9622 Numbers aren't essential for 'there are two' [Brown,JR]
17453 Numbers don't just mean preceding numerals [Heck]
12238 Numbers depend on non-number things [Orderberg]
9998 Number words have three uses [Hofweber]
10002 Is '2+2=4' singular or plural [Hofweber]
21644 Numbers are terms, adjectives or symbols [Hofweber]
21646 Piraha language may lack number words [Hofweber]

b. Types of number

9603 A largest prime is a contradiction [Euclid]
15905 Planes are 1-to1 with lines! [Cantor]
9886 Cardinals and reals do quite different jobs [Frege]
18254 Russell made reals and rationals different [Russell]
14144 Ordinals use relations; cardinals use classes [Russell]
14438 New problems require new types of number [Russell]
9896 Prime numbers are only measured by units [Dummett]
15273 'Dense' by division; 'continuous' by a Cut [Harré/Madden]
12333 Number types have varied sources [Badiou]
12322 Do unitless numbers exist? [Badiou]
18101 Ordinals can grow while cardinals stop [Bostock]
18100 Omega+1: new ordinal, same cardinal [Bostock]
3330 New types of number have to be postulated [Benardete,JA]
3337 Peano does ordinals, sets do cardinals [Benardete,JA]
10573 Dedekind implied many number 1's [Fine,K]
13641 Numbers can all reduce to the naturals [Shapiro]
8763 Presumably 3 is the same in all systems [Shapiro]
10102 Integers answer subtractions problems [George/Velleman]
10106 Rational numbers answer division problems [George/Velleman]
8454 There are natural, rational and real numbers [Orenstein]
15712 Each operation introduces new number types [Kaplan/Kaplan]
15942 Rational numbers are all divisible [Lavine]
8667 Integers are positives, negatives and zero [Friend]
8668 'Rational' numbers are all the fractions [Friend]
8670 The 'irrational' numbers are the non-fractions [Friend]

c. Priority of numbers

11044 Two implies one, but not vice versa [Aristotle]
10091 Integers from God, the rest from man [Kronecker]
10090 Dedekind defined all the main number types [Dedekind]
7524 Order, not quantity, defines numbers [Dedekind]
17452 Cardinals are smallest mapping ordinals [Dedekind]
9983 Cantor took the ordinal numbers to be primary [Cantor]
18256 Addition is essential to quantity [Frege]
14128 No logical priority of cardinals or ordinals [Russell]
14129 Ordinals presuppose more than cardinals do [Russell]
14132 Progressionless cardinals are the most basic [Russell]
13510 Numbers are just progression-members? [Russell]
13489 Von Neumann cardinals are types of ordinal [Neumann]
18255 Angle quantities are prior to order [Dummett]
9191 Ordinals precede cardinals in counting things [Dummett]
13411 Could you just know 3, 17 and 8? [Benacerraf]
9151 Numbers are defined by their natural ordering [Benacerraf]
18102 Cardinals are identified through ordinals [Bostock]
13892 We grasp sizes without grasping order [Wright,C]
8661 Ordinals are a level up from naturals [Friend]

d. Natural numbers

17798 The total natural numbers are finite [Cantor]
17423 Essence of numbers shows all functions [Sicha]
9965 There couldn't just be one number [Jubien]
13676 How to say that 0,1,2,... are the whole lot? [Shapiro]
8923 Succession identifies natural numbers [MacBride]
17877 Numbers are primitive, not axiomatic [Almog]

e. Ordinal numbers

17258 You get lost if you say 1,1,1,1,... [Hobbes]
14131 Dedekind ordinals are a mere progression [Dedekind]
9971 Cantor introduced the 'ordinals' [Cantor]
9892 Ordinals are more basic than cardinals [Cantor]
15911 Succession and limit give the ordinals [Cantor]
8640 Numbers define series, not vice versa [Frege]
14142 An ordinal is a series, not the nth case [Russell]
14141 Ordinals are defined by induction [Russell]
14139 Transfinite ordinals have a unique arithmetic [Russell]
14145 Ordinals are order-types, not numbers [Russell]
13487 No set of all ordinals in ZF [Zermelo]
12336 Define ordinals by transitive sets [Neumann]
17905 Numbers are just a progression [Quine]
13459 Ordinals: well-, partial- and totally-ordered [Hart,WD]
13463 Big cardinals at least equal the ordinals [Hart,WD]
13491 Infinity with Separation gives us ω and ω_1 [Hart,WD]
13492 Von Neumann's ordinals better for transfinite [Hart,WD]
13677 Natural numbers are treated as ordinals [Shapiro]
10861 Ordinals are different beyond infinity [Clegg]
10860 Preceding sets define ordinals [Clegg]
13530 Ordinal:equivalence classes or transitive sets [Wolf,RS]
10680 Transfinite theory needs ordinals [Hossack]
17928 Ordinal numbers represent order relations [Colyvan]
17756 First 'limit' is the union of finite ordinals [Walicki]
17755 Ordinals: null, singletons, and unions [Walicki]
17757 Members of ordinals are subsets of ordinals [Walicki]
17760 Two ordinals can be a single cardinal [Walicki]
17758 Ordinals: transitive sets of transitive sets [Walicki]
18842 Ordinals are properties of sets, not sets [Rumfitt]

f. Cardinal numbers

14136 Get cardinals by double abstraction from sets [Cantor]
14146 Relative size of cardinals is uncertain [Russell]
13891 Progressions explain cardinals [Benacerraf]
17904 Cardinality is matching an appropriate ordinal [Benacerraf]
17906 Numbers must involve counting things [Benacerraf]
18106 Aleph-1 is the next ordinal total [Bostock]
17457 Cardinals need the equinumerosity concept [Heck]
8664 Cardinals are totals with no order [Friend]

g. Real numbers

11042 Line parts must be continuous [Aristotle]
13445 The reals match the points on a line [Descartes]
17611 We seek the essence of continuity [Dedekind]
15906 Line points only match naturals or reals [Cantor]
11015 Cantor proved you can't list the reals [Cantor]
18252 Real numbers are ratios of quantities [Frege]
18253 Define the reals with the rationals [Frege]
9889 Real numbers are ratios of quantities [Frege]
14135 Reals are just a class of rationals [Russell]
18738 Reals as decimals don't approach something [Wittgenstein]
14648 Could we name all the reals, as 'Charley'? [Plantinga]
18095 The reals could be defined axiomatically [Bostock]
18099 As many reals as subsets of the naturals [Bostock]
10610 Reals theory won't contain naturals theory [Smith,P]
12395 Reals to measure, naturals to count [Kitcher]
13446 Reals were separated off in the 19th cent [Hart,WD]
17784 Real numbers can be eliminated, by fields [Mayberry]
10213 Reals: Dedekind cuts or Cauchy sequences? [Shapiro]
18243 Using the reals is knowing them [Shapiro]
10165 'Analysis' is the theory of the real numbers [Reck/Price]
10632 Reals are abstracted ratios [Hale]
10107 Real numbers answer square root problems [George/Velleman]
10854 Transcendental numbers don't solve equations [Clegg]
15711 Rationals everywhere, rest everywhere else! [Kaplan/Kaplan]
15922 If a Continuum gap, the reals are a set [Lavine]
8671 The Continuum of 'reals' has no gaps [Friend]
15364 English cannot name all the reals [Horsten]
10684 Real numbers are just lengths [Hossack]

h. Reals from Cauchy

15903 Reals are infinities of rational sequences [Cantor]
18251 Reals are limits of rational Cauchy sequences [Cantor]
18247 Reals have a potential to be produced [Brouwer]
18249 Cauchy defined a converging sequence [Shapiro]
18250 Cauchy gave a convergence condition [Lavine]

i. Reals from cuts

10572 A cut creates an irrational number [Dedekind]
14437 Dedekind's filled Cut; theft, not toil! [Dedekind]
18094 Cuts are reals, or cuts match reals? [Dedekind]
18244 Reals aren't cuts, but match cuts [Dedekind]
14436 Dedekind Cuts create two classes from a series [Russell]
18248 A real is a class of rationals [Russell/Whitehead]
15274 Continuous points are part of both sections [Harré/Madden]
18093 Cuts are unique but may be empty? [Bostock]
10575 Why is a Dedekind cut a number? [Fine,K]
18245 Some cuts aren't made rationally [Shapiro]
15904 A Cut is two commensurable ratios [Lavine]

j. Complex numbers

14439 Complex: ordered couples of reals [Russell]
12425 Accept complexes iff geometrical? [Kitcher]

k. Imaginary numbers

10858 i creates the new 'number plane' [Clegg]

l. Zero

9838 Treating 0 as a number avoids antinomies [Frege]
9564 'Zero' is defined, not primitive [Frege]
10551 0 is guaranteed, as the empty concept [Frege]
8653 Get 0 from 'not identical with itself' [Frege]
9837 '0' is refusal to answer 'how many?' [Husserl]
10574 Is 0 identical with the null set? [Fine,K]
10853 Geometrical maths links to lack of zero [Clegg]

m. One

7485 'One' is the basis of numbers, not a number [Pythagoras]
12074 The particular and 'one' are the same [Aristotle]
9894 A unit makes something one [Euclid]
12488 'One' is the most obvious idea of all [Locke]
8636 'One' isn't a property like 'wise' [Frege]
8654 One belongs to "identical with zero" [Frege]
14421 Discovering that 1 is a number was difficult [Russell]

n. Pi

17914 His sea was 10 cubits across, 30 round [Anon (Kings)]
9648 pi is a 'transcendental' number [Brown,JR]

4. Using Numbers

operations relating numbers to objects

a. Units

16146 Two isn't a unit, because it isn't one [Democritus]
12273 Number starts with the unit [Aristotle]
12369 Units are quantitatively indivisible [Aristotle]
17844 The unit is stipulated to be indivisible [Aristotle]
17845 Among rectilinear figures triangles are units [Aristotle]
17859 Units are equalising the unequal [Aristotle]
12920 Multiplicity requires units [Leibniz]
9147 Number can't be the addition of ones [Leibniz]
12956 Only whole numbers are units [Leibniz]
9801 Numbers must have equal units [Mill]
8641 Abstraction won't find numbers in objects [Frege]
9989 Units can be equal without being identical [Tait]
17429 Unit concepts isolate non-divisively [Frege]
20361 The 'unities' for reckoning need not exist [Nietzsche]
9576 Multiplicity is just one, one, one... [Husserl]
18392 All class-members are units [Armstrong]
9895 A number is a multitude of units [Dummett]
18071 One-operations segregate single objects [Kitcher]
17435 Objects are not natural units [Koslicki]

b. Quantity

14123 Quantity isn't what can be measured [Russell]
14158 Quantity is not part of mathematics [Russell]
17782 The Greek science of quantity was ratios [Mayberry]
17781 Reals were invented to clarify 'quantity' [Mayberry]

c. Counting procedure

17861 Two men do not make one thing [Aristotle]
646 Is counting addition or naming of numbers? [Aristotle]
19584 Counting to two implies infinity [Novalls]
14775 Numbers are just names devised for counting [Peirce]
9824 Countings needs correspondence and relation [Dedekind]
14120 Counting doesn't explain arithmetic [Russell]
14424 Numbers need meanings, for counting [Russell]
17424 Counting matches a string 1-1 [Sicha]
17425 Counting: equinumerosity and a quantifier [Sicha]
9898 Intransitive counting seems separate [Benacerraf]
17903 Only reciting numbers is standalone [Benacerraf]

4045 Children may have innate counting principles [Goldman]
17447 Use ordinals, and last one is a cardinal [Parsons,C]
17818 Partition into sets, then number is fixed [Yourgrau]
17822 Nothing is 'intrinsically' numbered [Yourgrau]
16014 Counting if and only if numerical identity? [Noonan]
17812 Numerical quantifiers, not number-objects? [White,NP]
3907 Can I know numbers but can't count things? [Scruton]
17448 Counting is use of numerals, not mention [Heck]
17456 Counting assigns successive cardinals [Heck]
17455 Is counting basically mindless? [Heck]
10712 Counting infinities needs set theory [Potter]
7466 Mesopotamians invented abstract numbers [Watson]
15912 Counting iff well-ordering [Lavine]
17694 We can often count with non-count nouns [Laycock]
17695 Some non-count words can take plurals [Laycock]
17439 What we count is partly cultural [Koslicki]
17433 We can count overlapping squares [Koslicki]
17462 Avoiding double counting needs differences [Rumfitt]

d. Counting via concepts

17427 Isolation as non-overlap, or as boundaries? [Frege]
17437 Countables lack parts like the whole [Frege]
17438 Our concepts decide what is countable [Frege]
17426 Unit concepts must isolate and unify [Frege]
17428 Counting seeks the number of some concept [Frege]
12154 Are types and tokens different objects? [Geach]
17518 'Coins in this box': coin unit, box as scope [Ayers]
17516 Sortal counting, with two sortals? [Ayers]
17529 Must sortals for identity also do counting? [Wiggins]
17530 Identity sortals don't imply countability [Wiggins]
13867 Counting must be relative to a sortal [Wright,C]
17434 Counting concepts need sharp boundaries [Koslicki]

e. Counting by correlation

15916 1-to-1, not well-ordering, for infinities [Frege]
17446 Counting makes 1-1 match of numeral/object [Frege]
9582 One-one correlation must match numbers [Frege]
17444 Count is basic, not 1-1 correspondence [Husserl]
14118 One-to-one needs no mention of unity [Russell]
9852 Equinumerosity by pairing, or counting [Dummett]
17450 'Just as many' needn't involve one-one [Heck]
17451 'Just as many' needs neither numbers nor 1-1 [Heck]

f. Arithmetic

13155 In 1+1, which of the ones becomes 2? [Plato]
9865 Pure arithmetic equalises the countable things [Plato]
16929 7+5 doesn't contain the concept of 12 [Kant]
17612 Arithmetic is just the consequence of counting [Dedekind]
14441 Commutative, Associative, Distributive laws [Russell]
10619 Truths of arithmetic are universal equations [Smith,P]
10026 There only be finite objects [Hodes]
15714 Commutative/Associative laws... [Kaplan/Kaplan]
15715 'Distributive' laws say order irrelevant [Kaplan/Kaplan]
21665 Primes are fundamental in arithmetic [Hofweber]

g. Applying mathematics

19390 Number is the revealed statis of reality [Leibniz]
12451 Scientific laws are of counting and measuring [Brouwer]
18118 Applying maths to reality is wicked [Brouwer]
9897 Application is counting and measurement [Benacerraf]
18066 Maths is useful because it fits the world [Kitcher]
9621 Maths represents the world through models [Brown,JR]
9946 Maths is applicable because it is general [George/Velleman]
21649 How can counting use numbers as objects? [Hofweber]
20660 Maths and nature have a deep shared origin [Wolfram]
19677 Ever mathematical conception is possible [Meillassoux]
14246 There is applied maths, so it isn't pure! [Oliver/Smiley]

5. The Infinite

where do large numbers lead to?

a. The Infinite

18090 Lack of infinity implies absurdities [Aristotle]
7555 Zeno's achievement was to state the problems [Russell]
8738 Lines can extend without end [Euclid]
13151 Not all infinities are equal [Newton]
10856 Truly infinite quantities are not variable [Bolzano]
15902 Infinities for irrationals seemed weird [Cantor]
15908 Diagonalisation reveals the big infinities [Cantor]
9633 We'll never leave Cantor's paradise [Hilbert]
12460 Idealisations extends into infinity [Hilbert]

12462 The finite can make the infinite certain [Hilbert]
14119 Must infinite numbers differ in size? [Russell]
14133 Cardinal and ordinal theories of infinity [Russell]
14420 Infinity was philosophy, now it's maths [Russell]
18708 Infinity is part of a law, not a number [Wittgenstein]
17809 The infinite can't be explained syntactically [Kreisel]
9813 Maths enables thought of the infinite [Badiou]
10491 Sentences are infinite, so why not numbers? [Boolos]
13509 Induction gives truths about infinities [Hart,WD]
17797 Cantor extended the finite [Mayberry]
17799 There is only an absolute true infinity [Mayberry]
18518 Infinite numbers aren't just very very big [Heil]
10866 Can infinities be built on the irrationals? [Clegg]
15947 The infinite extends experience of the big [Lavine]
15949 Infinity rests on ignorance of the very big [Lavine]
17730 For infinity, add negation to finiteness [Jenkins]
17923 Intuitionists allow a few safe infinities [Colyvan]

b. Mark of the infinite

9826 An infinite set is similar to its proper part [Dedekind]
7556 Infinity stays the same when you subtract [Russell]
14134 Infinity: no induction, and part equals whole [Russell]

c. Potential infinite

13212 Infinity is potential, not actual [Aristotle]
9632 Infinity is only potential, not actual [Kant]
15938 Infinities are never completed [Dummett]
15940 Intuitionists stick to the potential infinite [Lavine]

d. Actual infinite

12489 Adding two infinities is absurd [Locke]
19406 I strongly believe in the actual infinite [Leibniz]
13190 Infinities are useful fictions [Leibniz]
10855 Ban infinities; allow boundless increase [Gauss]
13464 Potential infinity needs an actual infinity [Cantor]
15923 Infinity is just bestowed by language [Poincaré]
12455 Infinite totalities are an illusion [Hilbert]
18171 Cantor and Dedekind: new complete infinities [Maddy]
18190 Calculus needs completed infinities [Maddy]
11025 Actual infinity awaits potential infinity [Read]
10125 Do the real numbers form an actual set? [George/Velleman]

e. Countable infinity

15897 Choice restores a sort of counting to sets [Zermelo]

f. Uncountable infinities

10112 There are different sizes of infinity [Cantor]
15896 Power Set produced uncountable sets [Cantor]
18959 Approach very large sets cautiously! [Putnam]
10483 Maths can do without huge infinities [Boolos]
15909 The symbol 'aleph' denotes cardinals [Lavine]

g. Continuum Hypothesis

17889 CH: Infinite reals match naturals or reals [Cantor]
13447 No size between naturals and reals? [Cantor]
10883 Gap between naturals and reals? [Cantor]
8733 No sets between naturals and reals? [Cantor]
13528 There are no sets between N and P(N) [Cantor]
9555 Gap between aleph-null and the continuum [Cantor]
10046 The Continuum Hypothesis asserts a gap [Gödel]
10868 Continuum plus set theory is consistent [Gödel]
13517 We can't refute or prove Continuum [Gödel]
12327 The Continuum breaks set theory? [Badiou]
17836 ZF+GCH and ZF+¬GCH are consistent [Hallett,M]
17615 Sets of reals are countable, or complete [Maddy]
13652 Continuum: cardinality of P(ω) [Shapiro]
10862 Is aleph-1 the cardinality of the reals? [Clegg]
10869 The Continuum and set theory are independent [Clegg]

h. Ordinal infinity

15893 Study collections counting with ordinals [Cantor]
18174 Cantor extended ordinals into the transfinite [Cantor]
10034 The number of numbers is not a number [Frege]
14143 ω and names the series of ordinals [Russell]
15915 Ordinals are basic, to count transfinite sets [Lavine]
15917 The 'biggest ordinal' leads to paradox [Lavine]
8663 There is an infinity of infinities [Friend]
8662 Limit ordinals begin the infinities [Friend]

i. Cardinal infinity

18173 1-1 is the only test of sameness of size [Cantor]
14138 Adding 1 won't make a new transfinite cardinal [Russell]
14140 Each big cardinal has an infinity of ordinals [Russell]

18200 Big sets should be studied as if-then [Putnam]
10480 First-order logic can't distinguish infinities [Hodges,W]
18172 Large cardinals are the key to sets [Maddy]
18175 For any cardinal there is always a larger [Maddy]
18196 'Inaccessibles' are beyond union or powers [Maddy]
17890 There are at least 11 types of large cardinal [Koellner]
15918 Largest cardinal: must be one, but can't be! [Lavine]

i. Infinite divisibility

18833 Lines can't be made of indivisibles [Aristotle]
19375 The continuum is not divided, but folded [Leibniz]
12457 Reality lacks the infinitely small [Hilbert]
8669 Infinities exist between the numbers [Friend]
17941 Are infinitesimals zero, or close to it? [Colyvan]

k. Infinitesimals

21382 Things get smaller without end [Anaxagoras]
18080 Tangents connect two close points [Leibniz]
18081 Nature uses the infinite everywhere [Leibniz]
18091 Infinitesimals are ghosts [Berkeley]
18085 Infinitesimals are less than any quantity [Cauchy]
18086 Weierstrass eliminated talk of infinitesimals [Weierstrass]
18110 Non-standard reals can be infinitesimals [Bostock]
18083 Infinitesimals effectively divide by zero [Kitcher]
18834 Infinitesimals cannot be ordered [Rumfitt]

l. Limits

18082 Constant convergence ends in equality [Newton]
18084 Limits are the termini of convergence [Cauchy]
18092 Limits are key, but do they exist? [Weierstrass]
18087 Diminishing change implies a limit [Dedekind]
18187 Limit theory needed clarity about reals [Maddy]

B. Foundations for Mathematics

1. Foundations for Mathematics

existence of fundamentals as a basis for mathematics

18271 Everything either proved, or spelled out [Frege]
21224 Pure maths is formal ontology [Husserl]
17880 Integers and induction are clear foundations [Skolem]
17810 Foundations need non-maths concepts [Kreisel]
9937 Maths does not need 'foundations' [Putnam]
12688 Maths studies categorical properties [Ellis]
17776 Basic maths is grasped directly [Mayberry]
17775 Maths has foundations for proof and definition [Mayberry]
17777 Foundations need concepts, truths and rules [Mayberry]
17804 Axioms can't explain axiomatised maths [Mayberry]
10236 Mathematics cannot be 'grounded' [Shapiro]
8764 Mathematics is based on categories [Shapiro]
8676 Sets, types, categories, models or topology? [Friend]
17922 If reals are reducible, arithmetic is basic [Colyvan]
18846 Found analysis in sets, not geometry? [Rumfitt]

2. Proof in Mathematics

establishing new certainties from a starting point

17967 We need to study the essence of proof [Hilbert]
17627 2+2=4 is more certain than its proof [Russell]
10256 Is proof inherently informal? [Shapiro]
9646 There are endless ways to prove something [Brown,JR]
9647 The four-colour map proof used computers [Brown,JR]
10692 Trade-off of rules and axioms [Beall/Restall]
10885 No explanation in computer proofs [Horsten]

3. Axioms for Geometry

formal starting points for deriving geometry

8673 Euclid's fifth postulate defines parallels [Euclid]
10250 Euclid lacks a principle of line continuity [Shapiro]
10302 Construction in Euclid, existence in Hilbert [Euclid]
14157 Moderns reject various Euclid propositions [Russell]
13007 A straight line is the shortest one [Archimedes]
12937 Try to demonstate Euclid's axioms [Leibniz]
3343 Denying parallels doesn't refute Kant [Benardete,JA]
9546 Euclid has possibilities; Hilbert has existence [Hilbert]
18742 Euclid has implicit congruence axioms [Hilbert]
18217 Hilbert's axioms avoid real numbers [Hilbert]
17965 Euclidean geometry has a simple basis [Hilbert]
10052 Projective geometry axioms unite the subject [Russell]
10157 Tarski's geometry is better, and free of sets [Tarski]
8997 Geometry can be conventional in 4 ways [Quine]
18156 Geometry axioms don't need the reals [Bostock]
18221 Metric number axioms, or synthetic spatial [Field,H]

13474 One parallel, none, or several? [Hart,WD]
9553 With analytic geometry, space can have axioms [Chihara]
18760 Euclid has a categorical axiomatisation [McGee]
17762 Much Euclidean is valid in non-Euclidean [Walicki]

4. Axioms for Number

formal starting points for derivations of arithmetic

a. Axioms for numbers

8737 Maybe arithmetic has no axioms [Kant]
5557 Axioms ought to be synthetic a priori [Kant]
8742 Build on equality, addition and successors [Mill]
13508 Base number, successor, and induction [Dedekind]
16883 Arithmetic has no axioms [Frege]
16864 Axioms are unprovable theorems [Frege]
3338 Numbers are successors to zero [Peano]
17964 Basic arithmetic founds number theory [Hilbert]
14124 Archimedes: multiply lesser to reach greater [Russell]
14431 Order definition needs a transitive relation [Russell]
9939 The axioms of arithmetic are revisable [Putnam]
9900 Is 3 part of 17, or not? [Benacerraf]
9899 Successor is x plus its members, or just [x] [Benacerraf]
10808 Maths generalises singletons [Lewis]
10608 Define 'successor' by an object lacking G [Smith,P]
10618 Numbers relate to zero via the ancestral [Smith,P]
10174 Mereological arithmetic needs infinite objects [Reck/Price]
17715 Applied maths needs the axioms to be true [Mares]
17312 To explain numbers, show the construction [Koslicki]

b. Baby arithmetic

10849 Baby arithmetic just does + and x [Smith,P]
10850 Baby Arithmetic is complete but dumb [Smith,P]

c. Robinson arithmetic

10851 Q has basics, quantifiers, and 1st-order logic [Smith,P]
10852 Robinson Arithmetic is not complete [Smith,P]

d. Peano arithmetic

18096 Numbers are the minimal satisfiers of PA [Dedekind]
13949 All Peano models are equally good? [Cartwright,R]
18113 PA refers to any satisfiers of the axioms [Peano]
17634 The Peano axioms are fairly obvious [Peano]
5897 Define 0, successor and universal predicate [Peano]
7530 Numbers can be defined just using 'class' [Russell]
18246 Why are the progressions numbers? [Shapiro]
14422 Any series fits Peano, with a few criteria [Russell]
14423 Peano's axioms don't define numbers [Russell]
18097 PA describes a unique structure [Bostock]
10068 Natural numbers have five conditions [Smith,P]
16902 PA treats 0 as a primitive number [Burge]
17441 Is HP more fundamental than PA? [Wright,C]
17853 PA needs semantic consequence? [Wright,C]
13862 There are five Peano axioms [Wright,C]
17854 What facts make PA true? [Wright,C]
10058 Unique successors needs the Axiom of Infinity [Musgrave]
17792 1st-order PA is parasitic on the 2nd-order [Mayberry]
13657 First-order arithmetic is inadequate [Shapiro]
10202 Natural numbers: start, successor, induction [Shapiro]
17459 Frege's Theorem explains PA [Heck]
17882 All of arithmetic, just from Peano Axioms! [Potter]
17887 PA can cope with unproven consistency [Koellner]
16343 Global reflection expresses PA is sound [Halbach]
16321 Compactness proves nonstandard models of PA [Halbach]

e. Peano arithmetic 2nd-order

18841 Categoricity implies one domain of numbers [Rumfitt]
10833 Second-order logic expresses many new things [Boalos]
10294 Second-order logic has power but poor models [Shapiro]
10164 Peano Arithmetic PA2 has three axioms [Reck/Price]
10979 Arithmetic has a second-order model [Read]
10980 2nd-order arithmetic can ensure categoricity [Read]
13701 One 2nd-order sentence validates arithmetic [Sider]
17899 2nd-order induction can cover all concepts [George/Velleman]
10674 Plural language gives one induction axiom [Hossack]

f. Mathematical induction

14130 Sooner induction axiomatic, than proved [Dedekind]
17855 Define induction using the ancestral? [Frege]
14125 Only finite numbers obey induction [Russell]
14147 Denial of induction gives the transfinite [Russell]
13358 First, then always the next, hence all [Bostock]
13359 All previous, so this one, hence for all [Bostock]

10603 Arithmetic needs 2nd-order for induction [Smith,P]
10891 Induction-definition allows induction-proof [Zalabardo]
17936 Transfinite induction reaches limit ordinals [Colyvan]
17754 Inductive proof depends on the ordering [Walicki]

g. Incompleteness of Arithmetic

15653 Reflexion Principles assert consistency of PA [Halbach]
17885 Gödel hoped for total decidability [Gödel]
10614 The truth-problem underlies Incompleteness [Gödel]
10072 Arithmetic must always be incomplete [Gödel]
9590 Axioms and rules won't deliver arithmetic [Gödel]
11069 Semantic consequence outruns provability [Gödel]
10118 Incompleteness 1: syntactically incomplete [Gödel]
10122 Incompleteness 2: consistency unprovable [Gödel]
10611 Some sentence is true iff unprovable [Gödel]
10867 One sentence is unprovable either way [Gödel]
3198 Arithmetic is incomplete OR inconsistent [Gödel]
10039 Assumptions beyond arithmetic are needed [Gödel]
10067 Gentzen proved the consistency of arithmetic [Gentzen]
10554 If proof is intuitive, Gödel is unsurprising [Dummett]
10604 Including multiplication = incomplete [Smith,P]
10848 Multiplication isn't trouble on its own [Smith,P]
17793 2nd-order isomorphism points to PA-1 [Mayberry]
10624 Incompleteness applies to logic too [Hale/Wright]
10128 Proof of arithmetic uses arithmetic [George/Velleman]
17891 Undecidability is continually redeeded [Koellner]

5. Definitions of Number

formal statements of what numbers are

a. Defining numbers

18152 Russell reduces numbers to quantifiers [Russell/Whitehead]
18153 Define numbers by operations [Wittgenstein]
18160 Number is what all numbers share [Wittgenstein]

b. Greek arithmetic

11041 Quantities are discrete or continuous [Aristotle]
17843 One is the principle of number [Aristotle]
17850 A many is just a collection of ones [Aristotle]
17851 Number is plurality measured by unity [Aristotle]
1600 If equals are taken from equals, equals remain [Euclid]
17783 A number is a ratio taken as a unit [Newton]
9800 Arithmetic has definitions and two axioms [Mill]
14116 Defining numbers through 1 is weak [Russell]
10205 Geometry of continuous, arithmetic of discrete [Shapiro]
19093 Greek maths is sensory, ours is inferential [Macbeth]

c. Fregean numbers

9992 'Extension of a concept' is indeterminate [Cantor]
13871 Numbers are objects, not Fregean concepts [Frege]
10625 A motive for number-objects won't justify it [Hale/Wright]
13872 Numbers are concept- not object-properties [Frege]
9816 Successor is a relation, not a function [Frege]
9953 Numbers are the only second-level concepts [Frege]
9954 Completed number functions yield names [Frege]
10139 Frege's abstraction extensions are confused [Fine,K]
10028 Number is sets of first-level concepts [Frege]
10029 Numbers must be objects, to define 'successor' [Frege]
9973 Number is the extension of a mapping concept [Frege]
16500 Numbers attach to concepts, not objects [Frege]
9990 Frege based numbers on concepts, not sets [Frege]
7738 Non-self-identity defines zero, and hence one [Frege]
13887 Explicit definition, rather than contextual [Frege]
13897 Number belongs to concept of its predecessors [Frege]
9856 Modern set theory numbers differ from Frege's [Dummett]

17636 Cardinals are classes of similar classes [Frege]
9902 A number is an equivalence class [Benacerraf]
17814 n is the set of n-membered sets [Frege]
17819 A set doesn't have a fixed number [Yourgrau]
17820 Counting elements is relative too [Yourgrau]
16890 Can the general explain the particular? [Frege]
8630 Build numbers on unity and increment [Frege]
17460 Number statements predicate of concepts [Frege]
11029 'Ten' may not attach to a concept [Rumfitt]
10013 Numbers are first-order, so objectual [Frege]
18181 Numbers are extensions, or concepts [Frege]
18103 Numbers are identical, hence are objects [Frege]
3331 Extensional definitions of numbers are tricky [Benardete,JA]
9949 Distinguish concept, object, extension [Frege]
10623 Basic Law V explained extensions of concepts [Frege]

9975 Frege ignored Cantor on concept-extension [Tait]
9586 Numbers predicate something of concepts [Frege]
10020 Frege fails to give sense to numbers [Hodes]
10553 Number is class of classes of same cardinality [Frege]
14117 Numbers are properties of classes [Russell]
17817 Number-as-property explains set versions [Yourgrau]
13894 Sameness of number is basic, not counting [Wright,C]
12215 Existence isn't just an identity [Fine,K]
18182 The extension of concepts is not important [Maddy]
18177 Frege numbers are impossible in ZFC [Maddy]
8297 Numbers are sets of same-sized sets [Lowe]
17902 Set plus its singleton is 'successor' [George/Velleman]
17461 How many? may not predicate of concepts [Rumfitt]

d. Hume's Principle

8649 Equal numbers have one-to-one correspondence [Hume]
9956 Number of Fs is extension of a concept [Frege]
13527 ZFC does not permit Fregean cardinals [Frege]
17442 1-1 correspondence is basic to number [Frege]
14425 Numbers label equinumerous collections [Russell]
18145 Hume's Principle has many interpretations [Bostock]
18148 HP is existential, and unexplanatory [Bostock]
18149 Identifying numbers has many modes [Bostock]
10140 Law V, then Hume's Law, then arithmetic [Wright,C]
8692 Replace basic law V with the Number Principle [Wright,C]
17440 HP is analytic of cardinal numbers? [Wright,C]
13893 1-1 correlation, not progression, fixes number [Wright,C]
8784 Hume's Principle, 2nd-order logic - logicism! [Hale/Wright]
10529 Hume's Principle is a definition, not a truth [Fine,K]
10530 Hume's Principle isn't adequate and defining [Fine,K]
8266 Counting precedes one-to-one correlation [Lowe]
8302 Equinumeracy is one-to-one correlation [Lowe]
10133 Hume's Principle implies Peano Postulates [George/Velleman]

e. Caesar problem

10232 The Caesar problem is a shortage of objects [Cantor]
10030 Unlike Caesar, numbers inherit properties [Frege]
11030 You can't use J.Caesar to count [Rumfitt]
8690 Can logic show Caesar isn't a number? [Frege]
10219 Julius Caesar isn't an extension of sets [Frege]
13889 1-1 correlations blocks the Caesar problem [Frege]
18142 One-one is good, but won't explain number [Frege]
9046 Are we sure Julius Caesar is not a number? [Frege]
18143 Is Caesar a number? Is he a set?? [Bostock]
13888 There is first a Caesar problem for extensions [Wright,C]
8787 What is the criterion for being a 'number'? [Hale/Wright]
18164 Solve Caesar problem by explicit definitions? [Maddy]
17997 Is the Caesar problem a category mistake? [Magidor]

f. Zermelo numbers

18178 For Zermelo the successor of n is {n} [Zermelo]
15524 Zermelo arithmetic rests on a primitive [Lewis]
8762 Is 1 a member of 3, or not? [Shapiro]

g. Von Neumann numbers

18179 For Von Neumann the successor of n is nU{n} [Neumann]
18180 Von N's numbers continue into transfinite [Maddy]
15925 Von N ordinals: the set of its predecessors [Neumann]
10997 Von Neumann numbers are helpful but wrong [Read]

6. Mathematics as Set Theory

mathematics actually is just set theory

a. Mathematics is set theory

18176 Pure mathematics is pure set theory [Cantor]
13027 Numbers are sets [Zermelo]
13672 All axiom systems need set theory [Neumann]
8463 Maths reduces to logic and set theory [Quine]
8203 Reduce all arithmetic to integers and sets [Quine]
10286 A 'set' is a mathematically well-behaved class [Hodges,W]
15517 We can't tell mathematicians to dump sets! [Lewis]
17794 Maths needs more than 1st-order ZF [Mayberry]
17802 Maths just is set theory [Mayberry]
17805 Set theory isn't part of mathematics [Mayberry]
10185 Set theory is now basic to mathematics [Burgess]
17825 Set theory explains commutative multiplication [Maddy]
17826 Standardly, numbers are said to be sets [Maddy]
17828 Numbers are properties of sets [Maddy]
10718 A natural number is a property of sets [Maddy]
18163 Maths rests on logic and set theory [Maddy]
18186 Points as reals show set theory's power [Maddy]

18183 Set theory unifies mathematics [Maddy]
18184 Set theory leads to fruitful axioms [Maddy]
18185 Set theory is the court of appeal of maths [Maddy]
18188 Rational line has gaps;set theory line doesn't [Maddy]
17618 Set-theory tracks mathematical depth [Maddy]
13656 Some numbers need set-theory [Shapiro]
10172 A set-theory approach is unified and explicit [Reck/Price]
10130 The Peano Postulates can be proven in ZFC [George/Velleman]
13518 Set theory unifies all maths objects [Wolf,RS]
15929 Set theory can't explain what proof is [Lavine]
14247 Sets represent, are, or replace the numbers [Oliver/Smiley]
8678 Set theory will explain most mathematics [Friend]
10881 'Ordinal' is a set-theoretic concept [Horsten]
15360 ZFC shows sets are mathematical [Horsten]
15369 Set theory adds power to arithmetic [Horsten]
10681 Sets instantiate the numeric properties [Hossack]
10685 Set theory is the science of infinity [Hossack]
16312 Reduce PA to sets using von N ordinals [Halbach]
17940 Maths proofs use hidden set theory [Colyvan]

b. Mathematics is not set theory

16896 Logicism makes set theory superfluous [Frege]
18161 Classes are irrelevant to mathematics [Wittgenstein]
8697 The ontology can't be settled mathematically [Benacerraf]
8304 No one pair of sets can define 'two' [Benacerraf]
9906 Reduce numbers to sets, but which is which? [Benacerraf]
17821 A set invites lots of numerical questions [Yourgrau]
17815 Maths can't wait for perfect set theory [Yourgrau]
10560 Set imperialists think they cover all maths [Fine,K]
17827 Sets have location, unlike numbers [Maddy]
17830 Numbers are set properties, so not reducible [Maddy]
10222 Maths based on categories, not sets? [Shapiro]
9643 Sets represent maths, but aren't maths? [Brown,JR]
9644 In set theory, what is an unlabelled graph? [Brown,JR]

7. Mathematical Structuralism

patterns and relations as basic to mathematics

a. Structuralism

9793 Mathematics focuses on relations [Aristotle]
8924 Structuralism began with Dedekind [Dedekind]
10180 Mathematicians study relations, not objects [Poincaré]
14434 Mathematical relations matter, not natures [Russell]
10190 Mathematics is abstract structures [Bourbaki]
10242 Structuralism covers concrete and abstract [Quine]
13415 Grasp a number, grasp its series [Benacerraf]
9907 If ordinals are recursion, that's structure [Benacerraf]
9908 The number system matters, not objects [Benacerraf]
9909 '3' defines the role of 'third' [Benacerraf]
9911 Numbers, like parts of a ruler, lack referents [Benacerraf]
8925 Maths object properties are all relations [Benacerraf]
9938 Is order the only property of numbers? [Benacerraf]
15515 Structuralist must accept relations [Lewis]
8921 Structuralism studies relations, not objects [Hellman]
9966 Mathematics studies abstract structure [Jubien]
10184 Structuralists treat 'reals' as a variable [Burgess]
10189 Actual number relation differ between models [Burgess]
6300 Maths objects are locations within patterns [Resnik]
6303 Sets are positions in patterns [Resnik]
10218 Baseball positions depend entirely on context [Shapiro]
10224 In the evens, 6 plays the role of 3 [Shapiro]
10228 Spot infinities through patterns? [Shapiro]
10230 4 is the structure of collections of four [Shapiro]
10249 Maths has three main structure types [Shapiro]
10273 Same structure in abstract and concrete [Shapiro]
10276 Either axioms or sets define structures [Shapiro]
8760 Number relations matter, not existence [Shapiro]
8761 Structures are abstracted from systems [Shapiro]
10167 Increasing abstraction led to structuralism [Reck/Price]
8702 8 is only 'equivalent' in different structures [Friend]
8701 An isolated number is of no interest [Friend]
17931 For structuralist categoricity is everything [Colyvan]

b. Varieties of structuralism

9153 Abstraction to positions, or to objects? [Dedekind]
10270 All versions of structuralism are equivalent [Shapiro]
10169 Relativist Structuralism just picks one model [Reck/Price]
10179 'Particular' and 'universal' structures [Reck/Price]
10181 Pattern Structuralism describes all models [Reck/Price]

10182 There are four types of structuralism [Reck/Price]
14085 'Deductivist' structuralism is just theories [Linnebo]
14086 Modal structuralism looks at possible models [Linnebo]
14084 Noneliminative structuralism accepts positions [Linnebo]
14087 Maths is structures among the sets [Linnebo]
8699 Are structures ante rem, or in re? [Friend]

c. Nominalist structuralism

12329 Modal maths has no ontology [Badiou]
8698 Mathematics studies possible structures [Hellman]
9557 Maths statements are modal conditionals [Hellman]
10263 Possibility is only possible models [Shapiro]
8922 Maths objects have roles, not natures [Hellman]
9925 Can structuralism combine with nominalism? [Burgess/Rosen]
10221 Structures are just their systems? [Shapiro]
10248 Numbers are bound variables [Shapiro]
10192 Replace sets with constructible sentences [Chihara]
10168 Formalist Structuralism has minimal commitment [Reck/Price]
10178 Will possible objects give us our infinity? [Reck/Price]
8695 Focus on relations and functions, not objects [Friend]
8696 Study not objects, but concepts about them [Friend]

d. Platonist structuralism

6295 Maths can't all be mental or physical [Resnik]
6296 Maths proof and truth are based on patterns [Resnik]
6301 Patterns relate on three different levels [Resnik]
6302 Why is a triangle a whole, not just points? [Resnik]
10220 A structure is one-over-many (systems) [Shapiro]
10223 There is no 'structure of all structures' [Shapiro]
8703 Model theory is the essence of maths [Shapiro]
9625 The idea of structure precedes experience [Brown,JR]
10176 Universalist Structuralism has general if-then [Reck/Price]
10177 Universalist Structuralism is eliminativist [Reck/Price]
14089 Structuralism has dependent platonic objects [Linnebo]
8700 Abstraction is pattern-spotting [Friend]

e. Structuralism critique

8639 One number could have many patterns [Frege]
9977 Ordinals don't just have relational qualities [Russell]
9627 Does the structure of 4 contain 2, or not? [Zermelo]
9829 Counting, not structure, defines 3 [Dummett]
9828 Does structure start with 0 or 1? [Dummett]
9192 4 has different positions in same structures [Dummett]
18116 Numbers can't be indeterminate positions [Bostock]
18117 Numbers are more than their relations [Bostock]
10815 Structural truths don't need 'structures' [Lewis]
10628 Structuralism neglects non-arithmetic numbers [Hale/Wright]
10629 Relative structures undermine objectivity [Hale/Wright]
18500 Structures aren't maths truthmakers [Heil]
10186 Circular definition of sets and structures? [Burgess]
10187 Algebra studies relations, not relation-theory [Burgess]
10188 What is the type of mathematical relations? [Burgess]
10274 Simple arithmetic needs infinite struture? [Shapiro]
9628 Structuralism doesn't like sets [Brown,JR]
10171 Must an infinite set be assumed? [Reck/Price]
8926 Structuralism needs positions to exist [MacBride]
14083 Structuralism for algebra, not for sets [Linnebo]
14090 Small depends on large (unlike the physical!) [Linnebo]
14505 Some maths just concerns entities [Koslicki]
17932 'In re' runs short of structures [Colyvan]

C. Sources of Mathematics

1. Mathematical Platonism

maths exists independently of conscious thinkers

a. For mathematical platonism

9863 Pure numbers rise above physical objects [Plato]
9864 In pure numbers, all ones are equal [Plato]
8727 Geometry concerns the eternal, not activity [Plato]
10216 Arithmetic mastery is knowing all numbers [Plato]
16150 Numbers are endless, and each has being [Plato]
13738 Mathematical objects clearly exist [Aristotle]
13874 Numbers are objects because of identity [Frege]
13875 The references of singular terms must exist [Frege]
7731 Numbers can't be external, or subjective [Frege]
7737 Identity implies numbers are objects [Frege]
8635 Numbers are objective and non-sensible [Frege]
8652 Numbers are clearly objects [Frege]
9580 Concepts recognise existing relations [Frege]
9589 Numbers are objective, though not real [Frege]

10303 Restricted Platonism just projects ideals [Bernays]
10043 Maths objects are absolutely essential [Gödel]
12328 Platonist axioms, Aristotelian definitions [Badiou]
10490 Abstraction enters before mathematics [Boolos]
10021 Numbers are representing objects [Hodes]
10022 Numerical terms can't stand for quantifiers [Hodes]
13869 Platonism says numbers are sortals [Wright,C]
8757 Only indispensability supports real maths [Field,H]
10200 Realism is in ontology, or in truth-value [Shapiro]
10210 Objects imply accompanying principles [Shapiro]
10215 Each number has its own essence [Shapiro]
10233 Could the Peano Axioms all be false? [Shapiro]
9606 Only intellect can spot irrational numbers [Brown,JR]
8298 Sets are instances of numbers [Lowe]
8311 If 2 is a particular, 2+2 makes 2 [Lowe]
4241 Numbers must be abstract objects [Lowe]
9183 Abstracta exist, as references for terms [Williamson]
10003 Arithmetic is easy, but hard to learn [Hofweber]
13741 Prime numbers exist, so numbers exist [Schaffer,J]

b. Against mathematical platonism

12339 Beauty, not truth, in mathematics [Aristotle]
12556 The existence of circles is irrelevant [Locke]
14162 Mathematics cares nothing for ontology [Russell]
17881 We want good operations, not objects [Skolem]
3663 Platonic objects lack causal power [Putnam]
9910 Individual number-objects lack properties [Benacerraf]
17927 Realists and anti-realist are both in trouble [Benacerraf]
9936 Platonism doesn't fit our epistemology [Benacerraf]
2521 Maths isn't causal or determinate or abstract [Katz]
9963 Why isn't platonism obvious to us? [Jubien]
9962 How can entities produce models? [Jubien]
9964 The objects are relational, not standalone [Jubien]
12211 $x*2=-1$ once had no solutions [Fine,K]
9934 Numbers became nouns around Plato's time [Burgess/Rosen]
17823 Maths object: which ones? how known? [Maddy]
8310 Does the existence of numbers really matter? [Lowe]
17454 Use of numbers needn't objectify them [Heck]
10089 'Abstract entities' is a label, not a solution [George/Velleman]
10008 Arithmetic is about inference, not entities [Hofweber]
15935 Maths is indifferent to its ontology [Lavine]
8681 If maths is real, how do we know it? [Friend]

2. Intuition of Mathematics

mathematics is knowable directly by pure reason

12421 Relevance? Impossibility? Exactness? [Kitcher]
16910 Maths need pure a priori intuition [Kant]
16917 Maths rests on space and time intuitions [Kant]
9830 Proving the obvious blocks intuition [Bolzano]
9831 Geometry needs intuition [Frege]
17816 Frege replaced intuition with logic [Frege]
12420 Intuition is baffling, or subjective [Kitcher]
12393 Intuition is fallible [Kitcher]
18061 Maths intuition won't help platonism [Kitcher]
8756 Intuition is limited and unreliable [Maddy]
10244 Intuition can be a hindrance to geometry [Shapiro]

3. Mathematical Nominalism

denial of the real existence of mathematical objects

21696 Nominalism rejects both attributes and classes [Quine]
18141 Reductionist or fictionalist nominalism? [Bostock]
18157 Application is too diverse as a basis [Bostock]
18212 Nominalism as physical, linguistic, or mental [Field,H]
19002 Maths statements are partly true [Yablo]

4. Mathematical Empiricism

arithmetic arising entirely from sense experience

a. Mathematical empiricism

9974 Tens of objects are the same and different [Aristotle]
7782 Every simple idea implies unity [Locke]
2197 A priori knowledge merely assists experience [Hume]
17617 Relation to objects gives maths meaning [Kant]
5201 Logic and maths are inductively true [Mill]
9360 If 2+2 objects made 5, what colour the 5th? [Lewis,Ci]
9888 Particular applications aren't part of maths [Dummett]
9795 Numbers are applied but generalised [Mill]
9796 Things possess the properties of numbers [Mill]
9794 Abstract numbers do no exist [Mill]
9798 Three pebbles split is a sensation [Mill]

9797 3 and 2+1 are different facts [Mill]
 9799 3=2+1 presupposes collections of objects [Mill]
 9802 Numbers denote physical properties [Mill]
 9803 Arrangement reveals number differences [Mill]
 9804 Arithmetic shows modes of number formation [Mill]
 9805 Cubed numbers are possible parcelled objects [Mill]
 8741 Abstract numbers don't exist [Mill]
 8631 Maths originates in abstraction from objects [Cantor]
 17628 Counting sheep led to $2+2=4$ [Russell]
 10271 Maths relates to empirical abstractions [Gödel]
 17738 Quine blurs arithmetic and physics [Jenkins]
 9940 Empirical maths would be changeable [Putnam]
 9914 Mathematical intuitions come from nature [Putnam]
 4044 Rat behaviour shows they can count [Goldman]
 12387 Mathematics starts in perception [Kitcher]
 12412 Maths idealises collecting and ordering [Kitcher]
 18065 Big maths is built up from ordinary things [Kitcher]
 18077 Complexes had to be described physically [Kitcher]
 13870 Numbers may actually prove empiricism wrong! [Wright,C]
 12209 Indispensability doesn't deny numbers [Fine,K]
 17733 Pure maths rests on experienced sets [Maddy]
 10280 Stones can be locations in patterns [Shapiro]
 17716 Maths relates abstracted properties [Mares]
 17719 Maths indispensable because it maps reality [Jenkins]
 17717 Arithmetic is arithmetizing empirical concepts [Jenkins]

b. Indispensability of mathematics

17536 Mathematics decides what can be natural [Heisenberg]
 9556 Maths is committed to abstract objects [Quine]
 18198 Maths is science, or uninterpreted [Quine]
 9941 Science needs more than consistency in maths [Putnam]
 18199 Indispensability supports some set theory [Putnam]
 8857 Science needs commitment to numbers [Putnam]
 8732 Maths weirdly anticipates physics [Weinberg]
 18150 Measurement doesn't need real numbers [Bostock]
 10261 Applied maths needs possibility, not truth [Field,H]
 18218 Hilbert explains by intrinsic spatial facts [Field,H]
 9623 Unlittmately Field cannot escape sets [Brown,JR]
 3143 Physics requires numbers and properties [Rey]
 8863 Pretend number exist, to discuss reality [Yablo]
 18204 Science is mean, set theory is lavish [Maddy]
 18207 Maybe applied reals are idealisations [Maddy]
 14604 Ontological basics have scientific roles [Schaffer,J]
 8712 Maths is true where it is indispensable [Friend]

c. Against mathematical empiricism

9861 The same thing is one and many [Plato]
 21963 God could make one and two not equal three [Descartes]
 16928 Maths is necessary, hence a priori [Kant]
 12411 Mill is too vague and simplistic [Kitcher]
 5656 Zero, infinity & probability are not empirical [Frege]
 14776 Number relations are not physical facts [Peirce]
 8633 Two boots and a pair are identical [Frege]
 9577 Number as a heap or its property is naïve [Frege]
 17697 Infinite numbers refute empiricism [Hilbert]
 5399 Our confidence in maths goes beyond experience [Russell]
 17806 Maths is infinite, so can't be physical [Curry]
 10735 Abstraction won't count repetitions [Geach]
 18201 Unlike science, maths finds the general obvious [Parsons,C]
 8884 Cardinality is not part of pattern-concepts [Sosa]
 17614 Perceptual arithmetic has been idealised away [Maddy]
 9612 How could infinite maths objects be physical? [Brown,JR]
 9610 Numbers are particulars, so are not abstracted [Brown,JR]
 10131 Particulars irrelevant if maths not about them [George/Velleman]
 10005 Arithmetic applies to fictional objects [Hofweber]

5. Numbers as Adjectival

numbers as properties, rather than objects

9113 Numbers are not properties of things [William of Ockham]
 9624 Numbers are a very general property of objects [Mill]
 9951 Numbers don't apply properties to objects [Frege]
 9952 Numbers are like quantifiers [Frege]
 11031 'Many' won't behave like 'four' [Rumfitt]
 8637 Objects can be seen as one or as not-one [Frege]
 9999 Translate adjectival numbers into nouns [Frege]
 14465 In 'ten men', 'ten' looks like an adjective [Russell]
 9903 Numbers aren't predicates (like adjectives) [Benacerraf]
 18158 Ordinals are mainly used adjectively [Bostock]

13873 Adjectival numbers are quantifiers [Wright,C]
 17829 Number words are unusual as adjectives [Maddy]
 9620 Are numbers based on objects or properties? [Brown,JR]
 10000 Adjectival numbers may just be quantifiers [Hofweber]

6. Logicism

maths is entirely the consequence of pure logic

a. Early logicism

8628 Maths is highly developed logic [Jevons]
 14788 Mathematics is more abstract than logic [Peirce]
 9945 Logicism shows empirical truths are irrelevant [Frege]
 7739 Arithmetic is analytic [Frege]
 8782 Frege offered a Platonist version of logicism [Frege]
 13608 Maths has no special axioms of its own [Frege]
 5658 Numbers are mappable extensions [Frege]
 16905 Arithmetic is logical because it is general [Frege]
 8655 Arithmetic is analytic a priori logic [Frege]
 16880 Logical foundations justify arithmetic [Frege]
 8689 Frege switched from logicism to geometryism [Frege]
 8487 Expand arithmetic symbolism into logic [Frege]
 18165 Basic Law V is pure logic [Frege]
 18166 No Rule V, no foundations at all [Frege]
 17635 Logic simplifies PA even further [Russell]
 14103 Maths is just p-implies-q propositions [Russell]
 13414 Numbers are sets of equivalent sets [Russell]
 6108 Maths can be deduced from logic [Russell]
 6423 We tried to reduce pure maths to logic [Russell]
 8683 Is arithmetic logic, or is all of maths? [Russell/Whitehead]
 10025 Arithmetic is higher-order logic [Russell/Whitehead]
 10037 'Principia' needs more precise syntax [Gödel]
 8748 Logicism can include geometry [Carnap]
 13936 Facts about numbers are logical truths [Carnap]
 11073 $2+1=3$ has the necessity of logic [Wittgenstein]
 5202 Maths and logic are tautological [Ayer]
 8993 Maths by definitions is part of logic [Quine]
 8788 Logicism needs a special status for logic [Hale/Wright]
 10568 Maths is known and derived from definitions [Fine,K]
 6408 Russell added three axioms to basic logic [Grayling]
 21723 Logic must define, number, successor, 0 [Linsky,B]
 8473 Is-a-member-of is a logical constant [Orenstein]
 21647 Logicism explains a priori arithmetic [Hofweber]

b. Type theory

10607 Frege's logic is hierarchical [Frege]
 21555 'x' is a 'u' needs u to be of a higher type [Russell]
 18003 For 'x' is a 'u' x and u need two types [Russell]
 10418 Self-exemplification is often innocuous [Swoyer]
 10047 Russell's improvements needed more axioms [Russell]
 21556 Classes can be reduced to typed functions [Russell]
 10093 Ramified theory used a different basis [Russell/Whitehead]
 8691 Type theory is not really logic [Friend]
 6409 Ramsey simplified types into levels [Ramsey]
 21557 Russell's reduction to language failed [Quine]
 18127 Type theory with 'levels', or with 'orders' [Bostock]
 10265 Chihara's system is a variant of type theory [Chihara]
 8759 Type theory can be updated and saved [Chihara]
 21703 'Ramified' is differences within types [Linsky,B]
 21714 Ramified theory subdivides each type [Linsky,B]
 21721 Higher types distinguish intensional concepts [Linsky,B]
 10092 Unramified theory of types has levels [George/Velleman]
 17901 No set of individuals plus sets? [George/Velleman]
 10095 Each type level is finite [George/Velleman]
 10094 Type theory also blocks harmless sets [George/Velleman]
 16308 Sets and truth have moved away from types [Halbach]

c. Neo-logicism

21718 Maybe ramified types is intensional logic [Russell]
 18144 HP is sufficient for number [Bostock]
 18147 Only numbers meet Hume's Principle? [Bostock]
 7804 Wright has revived logicism [Wright,C]
 13899 Cardinals themselves imply axioms and infinity [Wright,C]
 13896 Use Frege's strategy, but without classes [Wright,C]
 10622 Neo-Fregeans like contextual explanations [Hale/Wright]
 8783 There are other ways to revive logicism [Hale/Wright]
 12225 Truthmakers would help Neo-Fregeans [Hale/Wright]
 9224 We can have ontology-free logicism [Fine,K]
 10580 Necessity/priori shows maths is logic [Yablo]
 18167 Bypass Law V, getting number from HP? [Maddy]

13664 Logicism denies that logic is abstractions [Shapiro]
 19295 Arithmetic truths are not pure logic [Hale]
 21648 Neo-Fregeans are dazzled by technicality [Hofweber]

d. Logicism critique

12458 Kant's maths is beyond logic [Kant]
 2795 Kant says 7 plus 5 equals 12 is synthetic [Kant]
 13864 Platonism and logicism in ontological conflict [Wright,C]
 10033 Why should logic entail objects? [George/Velleman]
 10831 Frege's logicism included set-theory [Quine]
 10010 Can numbers be both logic and objects? [Hodes]
 9545 Late Frege says arithmetic is geometrical [Frege]
 17698 Logic already contains some arithmetic [Hilbert]
 10305 'Princ Mathematica' exceeds logic in domains [Bernays]
 10306 Maths theory differs from logic [Bernays]
 13426 Logicism is generalisations, but needs form [Ramsey]
 6849 Wittgenstein loathed logicism [Wittgenstein]
 1613 Logicism accepts the existence of abstracts [Quine]
 9004 Frege needs set theory to be part of logic [Quine]
 1635 Maths reduces to set theory, not to logic [Quine]
 17808 Logic is no clearer than mathematics [Curry]
 8754 Logic depends on mathematics [Heyting]
 9876 Logicism founders on sets and reduction [Dummett]
 9904 17 isn't the classes with 17 members [Benacerraf]
 12331 Logic definitional, maths axiomatic [Badiou]
 18111 Numbers as objects can't be logic? [Bostock]
 18129 Many logicist definitions are impredicative [Bostock]
 18146 HP seems to imply structuralism [Bostock]
 12423 Can there be truth without reference? [Kitcher]
 13863 Three problems ruined logicism [Wright,C]
 13895 Logicism has three standard objections [Wright,C]
 18215 How are conclusions in the premises? [Field,H]
 13471 Can maths existence claims be analytic? [Hart,WD]
 12224 Do all possible things exist? [Hale/Wright]
 13625 Maths and logic are inextricable [Shapiro]
 8744 Logic without objects can't found arithmetic [Shapiro]
 21713 Three Russell axioms scupper logicism [Linsky,B]
 21715 Set theory is the rival to logicism [Linsky,B]
 17449 Cardinality doesn't need 1-1 correspondence [Heck]
 17458 Equinumerosity differs from one-one [Heck]
 10006 Logic won't capture the semantics of numbers [Hofweber]
 11063 Logicism needs an analyticity theory [Hanna]
 17724 Is Hume's Principle analytic or definitive? [Jenkins]

7. Formalism

maths is the consequences of a set of symbols

9631 Formalism ignores types, and meta-games [Frege]
 9887 Formalism: applied? metatheory? infinity? [Frege]
 8751 Application makes arithmetic a science [Frege]
 10113 In the beginning was the sign [Hilbert]
 10115 Make consistence syntactic, not semantic [Hilbert]
 12459 Maths is about symbols [Hilbert]
 21570 Numbers are just verbal conveniences [Russell]
 6425 Formalism ignores numbers fitting reality [Russell]
 6424 Maths is just a set of arbitrary conventions [Russell]
 13425 Formalism ignores mathematical concepts [Ramsey]
 10154 Metamaths move from syntax to semantics [Feferman/Feferman]
 1616 Formalism denies all meaning to notations [Quine]
 10062 Formalism excludes creative maths [Musgrave]
 10063 Formalism is a bulwark of logical positivism [Musgrave]
 8749 There are no symbols for real numbers [Shapiro]
 8750 If maths is a game why is it so useful? [Shapiro]
 8752 Maths is implications of empty axioms [Shapiro]
 9629 There are no numbers, only numerals [Brown,JR]
 9630 Hilbert was the great formalist in maths [Brown,JR]
 9639 Does some maths depend on notation? [Brown,JR]
 8716 Formalism makes maths trivial and drifting [Friend]

8. Finitism

true mathematics only concerns finite quantities

10116 Finite proofs, to secure infinity [Hilbert]
 18112 Maths is meaningful plus idealised [Hilbert]
 13419 Finitism lack transfinite functions [Parsons,C]
 10114 Bounded quantification is originally finitary [George/Velleman]
 10134 Much infinite maths is finitely justified [George/Velleman]

9. Fictional Mathematics

mathematics is purely invented, and is not true

4533 Logic refers to fictitious entities [Nietzsche]

6104 Numbers are classes of classes, hence fictions [Russell]
 18159 Huge sets are just fairy stories [Bostock]
 18155 Fictions give predictions but not explanations [Bostock]
 18214 Empirical maths is just its utility [Field,H]
 18216 Abstracta map what is concrete [Field,H]
 18210 Maths is interesting fiction, not truth [Field,H]
 8714 $2+2=4$ is true in the way stories are true [Field,H]
 8862 Abstracta are existential metaphors [Yablo]
 10579 We quantify over numbers as shorthand [Yablo]

10. Constructivism

maths is entirely created by the human mind

a. Constructivism

9916 Convention, yes! Arbitrary, no! [Poincaré]
 8684 Paradoxes show we create maths [Russell/Whitehead]
 14248 Integers are primitive, sets build the rest [Cohen]
 15939 Constructeds proofs make truths [Dummett]
 18068 Arithmetic is both objective and constructed [Kitcher]
 18069 Arithmetic is an idealizing theory [Kitcher]
 18070 Arithmetical language allows higher levels [Kitcher]
 18072 Ontological and epistemological constructivism [Kitcher]
 9222 Maths is a set of imperative procedures [Fine,K]
 9223 My Proceduralism has five rules [Fine,K]
 10255 Can possible operations be blocked? [Shapiro]
 10254 Can ideal constructors destroy objects? [Shapiro]
 10264 Introduce a constructibility quantifier [Chihara]
 9608 Good maths often lacks constructions [Brown,JR]
 9645 If p depends on an unproven, it has no value [Brown,JR]
 8706 Constructivism rejects too much mathematics [Friend]

b. Intuitionism

9875 Frege followed Bolzano's anti-intuition [Frege]
 6426 Intuitionism denies excluded middle [Russell]
 12454 Intuitionists only accept denumerable sets [Brouwer]
 12453 We intuit bare two-oneness [Brouwer]
 8728 Intuitionism rejects unknown truths [Brouwer]
 1615 Intuitionism in maths sees classes as invented [Quine]
 8467 Intuitionist can't explain a 'limit' in maths [Quine]
 8466 Maths needs more than intuitionist ontology [Quine]
 10552 Total numbers are potential, but determinate [Dummett]
 8190 Intuitionists rely on proof, not truth [Dummett]
 3908 Maths isn't proofs if there are unprovables [Scruton]
 9548 Only contradiction stops maths object existing [Waterfield]
 8753 Intuitionism is crippling, and fruitful [Shapiro]
 18788 Base maths on counting and collecting [Mares]
 10123 Intuitionism: the idealism of mathematics [George/Velleman]
 10124 Some truths which are independent of proof [George/Velleman]
 15928 Intuitionism does without set theory [Lavine]
 8707 Bivalence OK, but not excluded middle [Friend]

c. Conceptualism

19226 Maths studies only hypotheses [Peirce]
 8642 Numbers in concepts, not in things [Frege]
 1614 Conceptualism says universals are mind-made [Quine]
 18138 Conceptualism: properties,infinity,truth? [Bostock]
 18140 Predicativism is the best conceptualism [Bostock]
 18063 A priori maths, via its concepts? [Kitcher]
 18064 If maths is meaning, what does it mean? [Kitcher]
 8731 Conceptualism isn't a maths ontology [Shapiro]

d. Predicativism

18203 Avoid non-predicative definitions [Poincaré]
 21559 We need rules to assess predicativity [Russell]
 21558 'Predicative' norms define classes [Russell]
 18126 Sets must be predicatively specifiable [Russell]
 18128 Some abstracta are made by a definition [Russell]
 18124 The defined can't be in the definer [Russell]
 21568 'Predicative' functions must be one level up [Russell]
 8746 Ramsey simplified the ramified type theory [Russell/Whitehead]
 8747 Realists like impredicative definitions [Gödel]
 10045 Ordinary maths uses impredicative definitions [Gödel]
 18131 Expressible abstracta must be denumerable [Bostock]
 18132 Predicativity matters for the real numbers [Bostock]
 18133 Many basic definitions are impredicative [Bostock]
 18134 Predicativism rules out huge cardinals [Bostock]
 18136 Only describables thinkable, so predicativism? [Bostock]
 18135 Indispensability may imply predicativism [Bostock]
 13663 Reject properties if they are ill-defined? [Shapiro]
 8730 'Impredicative' definitions seem circular [Shapiro]

15370 Predicativism: no circular definitions allowed [Horsten]

e. Psychologism

8621 Fluctuations of mind irrelevant to maths [Frege]
 14449 Inference is partly psychological [Russell]
 15211 Formal and psychological are linked [Harré/Madden]

7. Existence

A. Nature of Existence

1. Nature of Existence

what it means for things to exist

14874 The world actually destroys itself [Anaximander]
 481 Coming to be & passing away are just mixing [Anaxagoras]
 14028 Existence won't come from non-existence [Epicurus]
 14029 Destruction into void is irreversible [Epicurus]
 4475 Existence adds nothing to a concept [Kant]
 11008 Existence is a second-order property [Frege]
 8643 Affirmation of existence is denial of zero [Frege]
 14463 Existence needs descriptions, not names [Russell]
 13933 Internal and External existence questions [Carnap]
 13133 Facts are the basis of existence [Wittgenstein]
 6523 Postivists reject ontology [Ayer]
 12210 Quine's question and answer are bad [Fine,K]
 12320 Ontology is Cantorian mathematics [Badiou]
 16434 Only what actual exists could exist? [Stalnaker]
 16439 Existence is having spatio-temporal location [Stalnaker]
 15532 Allists or Noneists on controversial objects [Lewis]
 6070 Existence is primary, non-existence secondary [McGinn]
 7679 Ontology is the same as the basis of logic [Jacquette]
 12214 'Exists' is predicate, not quantifier [Fine,K]
 12217 Ontology works from outside reality [Fine,K]
 10279 Can we discover if a person is time-slices? [Shapiro]
 8321 Numbers must exist, so objects must exist [Lowe]
 14594 Ontology has roughly four targets [Swoyer]
 3517 'Ontology' means 'study of things which exist' [Maslin]
 4474 Existence must be possible, actual and logical [Moreland]
 9427 Humeans see the world as just events [Mumford]
 13925 Ontology derives from explanation [Haslanger]
 19659 A necessary existent is impossible [Meillassoux]
 18740 'Exist' isn't a property, so has no essence [Horsten/Pettigrew]
 19034 Is the world a whole, or a container? [Vetter]

2. Types of Existence

whether there is more than one type of existence

13221 Existence is either potential or actual [Aristotle]
 568 Existence is substance or aspects of it [Aristotle]
 16588 Existence is all or nothing [Augustine]
 16664 Only substances and accidents exist [Albert of Saxony]
 17174 There's just thought, objects and properties [Spinoza]
 17176 More reality of a thing means more attributes [Spinoza]
 21291 Existence/non-existence has no compromise [Hume]
 4168 Matter and intellect have relative existence [Schopenhauer]
 19470 Third Realm thoughts: unsensed and ownerless [Frege]
 10241 For Quine, there is only one way to exist [Quine]
 15789 Lewis splits existence, like Meinong [Lycan]
 10470 There are only sets and possibilia [Lewis]
 15535 Only some things there are 'exist'?? [Lewis]
 15520 Existence doesn't come in degrees [Lewis]
 12620 'Exist' varies, but so do things! [Fodor]
 13884 'Exist' does not have multiple senses [Wright,C]
 15078 Objects exist at different levels [Fine,K]
 18769 Do mathematicians use 'existence' differently? [Anderson,CA]

3. Being

basic idea of pure being, rather than actual existences

a. Nature of Being

447 Ultimate being is one and unchanging [Parmenides]
 448 When was Being created? [Parmenides]
 449 Being is not divisible, since it is all alike [Parmenides]
 12270 Being is one [Melissus]
 20901 True Being is crammed full of atoms [Democritus]
 12348 Being:incidental,per se,potential/actual,truth [Aristotle]
 11194 Being is in categories, or it makes true [Aristotle]
 11288 The basis is predicable, not predicated [Aristotle]
 15776 Being requires a way of being [Aristotle]
 22122 Being is the intellect's primary object [Duns Scotus]
 22121 The concept of being has only one meaning [Duns Scotus]

16789 Only God can annihilate being from anything [Hobbes]
 6919 Absolute thought cannot connect to being [Feuerbach]
 19457 Being is undetermined, undistinguishable [Feuerbach]
 22209 We aim to reveal a hidden region of Being [Husserl]
 11010 All possible objects of thought have being [Russell]
 21897 Beings instead of being is too scientific [Heidegger]
 15573 Our Being includes the Being of others [Heidegger]
 21908 Ontology should probe the unknowable [Deleuze]
 21902 'Being' is one, but Being is multiple [Deleuze]
 14664 Necessary beings exist in all worlds [Plantinga]
 12340 There is no Being as a whole [Badiou]
 9809 Mathematics inscribes being as such [Badiou]
 14401 All propositions are entirely about being [Lewis]
 7707 Prior questions are raised by being [Jacquette]
 12254 At least eleven types of being [Oderberg]

b. Being and existence

14161 Things without existence may have 'being' [Russell]
 16966 There is no being/existence distinction [Quine]
 12323 Existence is thought Being [Badiou]
 14253 Being and existence can be distinguished [Fine,K]

c. Becoming

9862 Rationality must grasp being from becoming [Plato]
 229 The one is eternal and unchanging [Plato]
 20364 Reason for permanence, sensation for becoming [Plato]
 324 Being, space and becoming are eternal [Plato]
 5645 Being and nothing are resolved in becoming [Hegel]
 22076 Being is only perceptible as becoming [Schelling]
 20360 Germans value becoming above being [Nietzsche]
 7079 Nietzsche resists nihilism through new values [Nietzsche]
 20359 Becoming is more obscure than being [Nietzsche]
 21846 Bergson liked becomings and multiplicities [Bergson]
 21899 There is no being beyond becoming [Deleuze]

d. Non-being

445 What necessarily doesn't exist can't be known [Parmenides]
 1503 There is no such thing as nothing [Parmenides]
 18933 Both Not-Being and Being are impossible [Gorgias]
 20902 Being and Nonbeing are alike, as void and body [Democritus]
 20904 The non-existent has causal powers [Democritus]
 11278 Reference of that-which-is-not? [Plato]
 21762 Non-existence reveals existence [Hegel]
 21977 Nothing exists, as thinkable and expressible [Hegel]
 14393 The truthmaker of non-existence is everything [Merricks]
 12408 Sartre to Waitress:... [Sommers,W]

e. Being and nothing

1643 If non-existence is a problem, so is existence [Plato]
 1706 Negations don't exist when we negate them [Aristotle]
 16587 Prime matter has a halfway existence [Averroes]
 11195 We affirm being of absences [Aquinas]
 21760 Thinking of nothing is still thought [Hegel]
 21982 How wonderful, being able to see Nobody! [Carroll,L]
 18317 'Real being' is just an empty construction [Nietzsche]
 11277 Being baffles because non-being does [Politis]

f. Primary being

21820 Parmenides identified Being with Nous [Parmenides]
 21822 First is simple, the One is multiple [Anaxagoras]
 21818 The Good is superior to being [Plato]
 21821 Plato's Parmenides has a three-part theory [Plato]
 11286 Primary being is more than a subject [Politis]
 11234 Primary being is essence [Aristotle]
 11279 Being: universals,substratum,essence? [Aristotle]
 11232 Primary being has intrinsic existence [Aristotle]
 11293 Non-primary beings lack essence [Aristotle]
 11297 Primary being is essence and subject [Aristotle]
 21812 Being is the product of pure intellect [Plotinus]
 21817 The One doesn't exist, but causes existence [Plotinus]
 21824 The One is a principle which transcends Being [Plotinus]
 22103 All our concepts are additions to being [Aquinas]
 6920 That which is my essence is my being [Feuerbach]

g. Particular being

20903 Things differ by shape, order and position [Democritus]
 566 Something exists beyond individuals [Aristotle]
 16090 Only substance reveals the nature of being [Aristotle]
 570 Oneness and existence add nothing to facts [Aristotle]
 12061 Ousia is the primary subject [Aristotle]
 10946 Existence requires 'thisness' [Aristotle]

16152 All being depends on substance [Aristotle]
11295 All being must be definable [Aristotle]
13735 Units of being matter, not existence [Aristotle]
21813 Number determines individual being [Plotinus]
15812 Being implies individual distinctness [Aquinas]
9110 'Thing' and 'to be' assert the same idea [William of Ockham]
12319 A being must be one being [Leibniz]
6921 Particulars for being, generality for thought [Feuerbach]
4064 Existence and identity are one concept [Quine]
13404 Necessary existence is essential instantiation [Jubien]

h. Dasein (being human)

8228 On the brink of sleep being is revealed [Anon (Cent)]
12932 We conceive being from our own being [Leibniz]
22025 Self-consciousness cannot disclose 'being' [Novalis]
6926 True being is of senses, feeling and love [Feuerbach]
18315 'Being' is derived from the ego-concept [Nietzsche]
22211 Thing and perception are two modes of Being [Husserl]
20752 Being for man is what is not yet [Ortega y Gasset]
9273 'Being' is to affirm human uniqueness [Heidegger]
22157 Being is a concern for Dasein [Heidegger]
8137 Dasein is both ahead and alongside... [Heidegger]
21951 Dasein dissolves when in company [Heidegger]
20745 Dasein expresses not 'what', but being [Heidegger]
8134 Dasein is the human manner of Being [Heidegger]
8135 'Dasein' is owned, and it matters [Heidegger]
21948 Dasein is self-understanding and owning being [Heidegger]
15584 Humanity and Being are interdependent [Heidegger]
22227 Being is in-itself or for-itself [Sartre]

i. Deflating being

5657 Quantification denies the concept of being [Frege]
10787 Is being just referent of the verb 'to be'? [Marcus (Barcan)]
21903 Ontology is a strange adventure [Deleuze]
21904 Engage Being, don't solve it [Deleuze]
21847 Before Being there is politics [Deleuze]
12332 Being is the rejection of units [Badiou]
12326 Primitive Being is the empty set [Badiou]

4. Abstract Existence

existing non-causally and outside space-time

5105 Truths of geometry are eternal and not in time [Aristotle]
8910 General and universal are inventions of minds [Locke]
6717 Abstract ideas are impossible [Berkeley]
7700 We cannot think of abstract triangles [Hume]
8911 Are there mental, and even physical, abstracta? [Rosen]
8634 The equator is imaginary, not fictitious [Frege]
8960 Abstraction is either trivial or problematic [Carnap]
10136 Points are non-abstracted abstractions [Fine, K]
10144 Not abstract objects, but truth-procedures [Fine, K]
10145 Abstracts cannot be identified with sets [Fine, K]
12212 Complex numbers are typical abstracta [Fine, K]
4239 How could we know of non-causal things? [Lowe]
14592 Some abstracta have beginnings [Swoyer]

5. Reason for Existence

why do things (or anything at all) exist?

458 Being cannot be created or perish [Empedocles]
1707 Perhaps necessity is the basis of existence [Aristotle]
17179 Existence and non-existence need reasons [Spinoza]
19400 Maximum possibilities demand existence [Leibniz]
19401 God chooses fitness or perfection [Leibniz]
7696 Why is there something rather than nothing? [Leibniz]
19341 Possibilities strain towards existence [Leibniz]
19428 Possibles have a drive to exist [Leibniz]
5062 Why existence, and why this? [Leibniz]
3942 I only believe existence if I have reasons [Berkeley]
5646 The existence of all is provable ontologically [Hegel]
16007 Assume existence, rather than proving it [Kierkegaard]
7687 Existence is completeness and consistency [Jacquette]
7692 Being is maximal consistency [Jacquette]
19662 Contingency is necessary, which needs something [Meillassoux]
17320 Something exists, if p or not-p is true! [Liggins]
19482 Physics says matter shouldn't be here [New Sci.]
19483 CP Violation helps to explain matter [New Sci.]

6. Criterion for Existence

what is the hallmark for deciding what exists?

7022 Existence is capacity to give or receive acts [Plato]
527 Everything exists which anyone perceives [Metrodorus of Chios]

20860 What participates in substance exists [Zeno of Citium]
5992 Action is the criterion for existence [Chrysippus]
16660 Distinctness needs one or both separate? [Duns Scotus]
12554 Only experience reveals existence [Locke]
19393 What is not active is nothing [Leibniz]
3952 I know that nothing inconsistent can exist [Berkeley]
18899 Is existence part of a concept? [Frege]
18995 Frege wrongly links existence to concepts [Frege]
18521 Existence is possibility of action [Santayana]
14173 Existents cause, but so do non-existents [Russell]
3534 To be is to have causal powers [Alexander, S]
7680 Ontology is possible only as phenomenology [Heidegger]
19277 Existence by variables; eliminate terms [Quine]
16965 Existences is just quantification [Quine]
1633 Ontological questions are hopelessly circular [Quine]
9811 The essence of being is to appear [Badiou]
14746 Existence depends on our concepts? [Sider]
6062 Instantiating properties presupposes existence [McGinn]
6065 'Something exists' instantiates no properties [McGinn]
12216 Real objects figure in facts [Fine, K]
12218 'Real' and 'fundamental' are different [Fine, K]
8300 Existence is possession of causal power [Lowe]
4768 You can't infer reality from what can be known [Psillos]
12447 Have causal powers, or we only know them? [Azzouni]
9501 Causation delimits existence too narrowly [Bird]
18480 Maybe it only exists if it is a truthmaker? [MacBride]
19654 Existence is thought/being correlation? [Meillassoux]
14942 Ontology must explain and predict [Ladyman/Ross]
14948 To be is to be a real pattern [Ladyman/Ross]
14493 Existence: explanation, causal or composition? [Thomasson]
18917 Existence concerns the world, not objects [Engelbrechtsen]

B. Change in Existence

1. Nature of Change

how existence can persist even when becoming different

452 Human concepts of change are just words [Parmenides]
5112 Love and hatred are the cause of all change [Empedocles]
20893 Existence is eternal [Democritus]
2063 If beauty keeps changing how can it exist? [Plato]
2061 The best things change least [Plato]
2060 Change is either alteration or motion [Plato]
16115 Change is the actuality of a potential [Aristotle]
16100 True change involves matter or the logos [Aristotle]
16101 A change in qualities is mere alteration [Aristotle]
12133 There is 'alteration' or 'passing away' [Aristotle]
1696 Benefits are always lost, never gained [Aristotle]
1700 Things can change in just six different ways [Aristotle]
16118 Nature is intrinsic potential for change [Aristotle]
14030 The totality is complete and unchanging [Epicurus]
3072 Everything is in continuous destruction [Aurelius]
17253 Change is just movement [Hobbes]
15200 Change can't be lots of changeless facts [McTaggart]
14761 Change is not just two different qualities [McTaggart]
8198 Cambridge Change is only relative change [Dummett]
15261 Humean change is just replacement [Harré/Madden]
15540 Properties as relations, to explain change? [Lewis]
15541 Change is particle rearrangement [Lowe]
8281 Change is new creation, or just phases? [Lowe]
4201 Fix time to property, or object, or no change [Lowe]
4202 Change components, qualities or substance [Lowe]
15858 Elements are persistents through change [Harte, V]
12838 No change in timeless 4Dism [Simons]
12842 Real relational changes, and 'Cambridge' [Simons]

2. Processes

accepting purposeful sequences of happenings as existents

13213 Creation and destruction are complementary [Aristotle]
15768 An actuality is thought to be a process [Aristotle]
15389 Processes are events starting and stopping [Whitehead]
11092 One thing with stages is a process [Quine]
12683 Objects are a type of process [Ellis]
16554 Activities have at least 11 components [Machamer/Darden/Crave]
14760 For 4D, things and processes are the same [Sider]
12836 Process ontology mustn't refer to objects! [Simons]
12841 I don't believe in processes [Simons]
8979 Slow events are called 'processes'? [Simons]
8981 Processes are stuff, events are countable [Simons]

14947 Any process is describable as information [Ladyman/Ross]
14562 A process is unified by its underlying powers [Mumford/Anjum]
19480 Process philosophy urges dynamic nature [Seibt]
19479 Some processes have no owners [Seibt]
19481 Process comes first in quantum mechanics [Seibt]
20468 Quantum mechanics only deals with processes [Rovelli]

3. Moments

treating small units of time as among the things that exist

12880 Smiles and skids rest on other things [Simons]
12881 A smile is a thing, not an event [Simons]
12883 Disturbances are changing moments [Simons]
12882 A wave isn't itself a process [Simons]

4. Events

discreet individual components that make up what happens

a. Nature of events

15832 Events are states of affairs that occur [Chisholm]
8439 Each event has a unique causal history [Bennett]
8440 Time of occurrence is essential to an event [Bennett]
7771 Adverbs need events to predicate of [Davidson]
8860 Language doesn't prove events exist [Yablo]
17520 Events do not have natural boundaries [Ayers]
15561 Different 'event' concepts for contexts? [Lewis]
15565 An event's essence is its preconditions [Lewis]
15566 Events are classes, with a mereology [Lewis]
15567 Some events involve no change [Lewis]
3310 If events have qualities, they exist [Benardete, JA]
8270 Events are changes in objects [Lowe]
4219 Two events could be at one place and time [Lowe]
6143 Prolonged events don't exist at a time [Merricks]
12840 Events don't have identity conditions [Simons]
8973 Relativity needs events for simultaneity [Simons]
14541 Events are changes, not states [Mumford/Anjum]

b. Events as primitive

6402 Russell reduced force and matter to events [Russell]
7949 Varied event descriptions explain behaviour [Davidson]
8348 Explanation of normal talk needs events [Davidson]
9843 Knowing events precedes causes and effects [Dummett]
14602 Events can only be individuated causally [Davidson]
14004 Five reasons why we need events [Davidson]
15268 Objects from events, or vice versa? [Harré/Madden]
8308 Singular causation needs events [Lowe]
4221 Does physics need an event-ontology? [Lowe]
12839 Relativity is committed to objects [Simons]
20467 Events constitute quantum mechanics [Rovelli]

c. Reduction of events

8205 Using bodies, two events may seem one [Quine]
12670 Events are changes in energy-distribution [Ellis]
8978 Events are not fundamental to ontology [Bennett]
3747 Events are fast changes of interest to us [O'Connor]
8278 Using events to individuate events is circular [Lowe]
4779 Events are exemplifications of properties [Kim]
10369 Kim's event-size depends on property-size [Kim]
8974 Events are object + attribute + time [Kim]
8976 Ordered-triple events would be abstract [Simons]
8975 For an event, ordered triples must be united [Kim]
8977 Kim needs to avoid timeless properties [Simons]
8980 Kim's theory results in too many events [Simons]
15257 For induction, use things, not events [Harré/Madden]
15564 Events are properties of spacetime regions [Lewis]
9413 An event is a change in or to an object [Lombard]
8518 Events are trope-sequences [Campbell, K]
4220 Events exemplify properties at a time [Lowe]
4225 Events are changes in properties/relations [Lowe]

C. Structure of Existence

1. Grounding

one existence resting on some more basic aspect of existence

a. Nature of grounding

17186 Order in reality is imaginary [Spinoza]
21765 Grounds of things are intrinsic [Hegel]
15007 Grounding includes non-fundamentals [Sider]
15006 Grounding: truth, explanation, necessity [Fine, K]
14262 Grounding is transitive, irreflexive, factive [Fine, K]
17272 Necessity and 'in virtue of' are different [Fine, K]
17276 Its causes don't fix a thing's reality [Fine, K]

17284 'Immediate' ground suggests a hierarchy [Fine,K]
17285 Stict ground goes down, weak sideways [Fine,K]
17288 The groundee is revealing, not the grounder [Fine,K]
14097 True 'in virtue of' facts, or of items? [Rosen]
18472 Which is prior, grounding or truthmaking? [MacBride]
18471 Grounding relations are very varied [MacBride]
13748 Grounding is the main primitive of metaphysics [Schaffer,J]
17304 Grounding links levels of the world [Schaffer,J]
17306 Ground has a strict partial ordering [Schaffer,J]
16598 Scholastics obsessed about priority [Pasnau]
17292 'In virtue of' could be reflexive, so avoid it [Audi,P]
17295 Ground relations depend on the properties [Audi,P]
17297 Shape non-causally determines powers [Audi,P]
17302 Ground has logical relation features [Audi,P]
17303 Identify or eliminate, don't ground? [Audi,P]
17270 Which is prior, grounding or dependence? [Correia/Schnieder]

b. Relata of grounding

15055 Grounding should be between sentences [Fine,K]
17280 Ground is an operator, not a relation [Fine,K]
17281 Facts are the best relata for grounding [Fine,K]
17314 Facts for grounding, objects for dependence [Koslicki]
17326 {S} depending on S isn't facts [Liggins]
17294 Grounding is a relation between single facts [Audi,P]
17300 Grounding by facts needs properties [Audi,P]
19015 Grounding between entities, or sentences [Vetter]

c. Grounding and explanation

17262 Aristotle's explanations involve grounding [Aristotle]
17265 Philosophical proofs show the grounds [Bolzano]
14268 Bottom up and top down grounding? [Fine,K]
17274 Philosophers explain using ground [Fine,K]
17290 Only metaphysical ground needs essences [Fine,K]
17727 Our concept grounding reveals the world [Jenkins]
17296 Explanations require the grounding relation [Audi,P]
17268 Grounding and explanation are quite different [Correia/Schnieder]

d. Grounding and reduction

17278 Explaining reductions needs ground [Fine,K]
17301 Reduction is identity, so not grounding [Audi,P]

2. Reduction

explaining higher levels of existence by lower ones

3425 Reduction is derivation via bridge principles [Nagel,E]
6550 Reduction requires dependence of properties [Sellars]
3473 What is supposed to reduce to what? [Searle]
5791 Reduce by eliminating or explaining [Searle]
5799 We 'eliminate' appearance for reality [Searle]
6984 Smooth reductions preserve higher-level laws [Jackson]
2317 Light, genes, hot, transparent - reducible! [Kim]
8607 Supervenience is stripped down reductionism [Lewis]
3990 Physical truth gives the whole truth [Lewis]
5516 Reduction is identify, constitute or eliminate [Parfit]
4986 'Bridge laws' are a weaker reductionism [Kirk,R]
6531 Institution tokens are reducible but not types [Lycan]
6532 Reductions are groups of the same tokens [Lycan]
15050 Reduction could be approaching logical form [Fine,K]
15051 Reduction by semantics and understanding? [Fine,K]
15052 Modal reductions entail truths [Fine,K]
15056 Reduction implies unreality of the reduced [Fine,K]
7017 Reductionism abandons levels of reality [Heil]
18539 Categories are too messy for reduction [Heil]
21110 Basic physics should explain all physics [Krauss]
7508 Reductionism should connect, not replace [Pinker]
7944 There are four types of reduction [Macdonald,C]
14599 Theoretical, Definitional, Ontological reduction [Schaffer,J]
22180 Multiple realisability blocks reduction [Okasha]
16345 Is an interpretation a reduction? [Halbach]

3. Levels of Reality

reality has a structure of interdependent levels

5311 Laws persist in rising levels of explanation [Wilson,EO]
6534 A key exists at many levels of abstraction [Lycan]
5500 Organisms abstract above, structural below [Lycan]
4616 Supervenience is determined but independent [Heil]
7003 Reality itself does not have levels [Heil]
16062 The reduction relations defy reduction [Lynch/Glasgow]

4. Ontological Dependence

things that rely on other things for their existence

1699 Implication of existence shows priority [Aristotle]

18366 The cause of the existence has priority [Aristotle]
11154 Prior things can exist on their own [Aristotle]
17443 Dependence between truths is obscure [Heck]
17445 The intuitive concepts are fundamental [Frege]
17656 Primitivity and priority are always relative [Goodman]
11919 Essence is what founds dependence [Molnar]
11151 Essence may need another's existence [Fine,K]
14251 x depends on y: y has to exist [Fine,K]
14254 Dependency matches definition relations [Fine,K]
14257 Dependence is ineliminability from definition [Fine,K]
14261 There is 'weak' and 'strong' dependence [Fine,K]
12879 Exist separately, or entirely alone? [Simons]
14091 Do sets and numbers have one-way dependence? [Linnebo]
17327 Non-causal dependence is a bit vague [Liggins]
17720 There's six types of dependence [Jenkins]

5. Supervenience

inseparability of two modes of existence

a. Nature of supervenience

12922 Fixed relations make an 'expression' [Leibniz]
3536 Supervenient properties are not emergent [Kim]
2310 Supervenience may involve dependence [Kim]
9650 Supervenience is a modal concept [Lewis]
4077 The aesthetic supervenes on the physical [Crane]
2392 No-A-without-B is supervenience [Chalmers]
10421 Supervenience is between property-groups [Swoyer]
19281 Supervenes needs distinct characterisations [Hale]
15017 Supervenience is a modal connection [Sider]
6155 Supervenience is a one-way relation [Rowlands]
13747 Supervenience is just modal correlation [Schaffer,J]
16039 No A-difference without a B-difference [Bennett,K]
16043 Supervenience is non-(not a)-symmetric [Bennett,K]
18680 Supervenience is often stated negatively [Orsi]

b. Types of supervenience

3841 'Supervenience' is hopelessly ambiguous [Searle]
2315 Mereological supervenience is parts-fix-whole [Kim]
3991 Sometimes supervenience is reduction [Lewis]
16052 'Superdupervenience' adds an explanation [Horgan,T]
16053 'Global' supervenience in all possible worlds [Horgan,T]
2393 No-possible-A-sans-B is logical supervenience [Chalmers]
2394 No-actual-A-sans-B is natural supervenience [Chalmers]
11055 Supervenience can be defined strongly [Hanna]
16047 Weak supervenience and strong supervenience [Bennett,K]

c. Significance of supervenience

3644 Things can be joined without being identical [Descartes]
16045 General facts supervene but aren't entailed [Russell]
16051 Life supervenes on and changes the physical [Morgan,L]
16050 Goodness supervenes on the picture itself [Hare]
3532 Supervenient properties aren't integral [Maslin]
3533 Is supervenience just causality? [Searle]
13746 Supervenience lacks deep explanation [Kim]
13745 Supervenience is not a dependence relation [Kim]
3431 Is supervenience dependence without reduction? [Kim]
4242 Supervenience shows our ignorance [Nagel]
8606 Supervenience denies independent variation [Lewis]
16056 Don't observe supervenience - explain it! [Horgan,T]
4078 Constitution is supervenience without identity [Crane]
2398 Reduction requires logical supervenience [Chalmers]
3523 Shadows are non-reducibly supervenient [Maslin]
16061 'Logically supervenient' facts add nothing new [Lynch/Glasgow]
9500 Supervenience leaves necessities untouched [Bird]
21664 Supervenience doesn't illuminate necessities [Hofweber]
17486 Supervenience is robust property co-variance [Hendry]
17322 Necessities supervene but don't depend [Liggins]
16040 At least 5 big supervenience claims [Bennett,K]
16044 Entailment won't necessitate supervenience [Bennett,K]
16046 How do supervenience and reduction relate? [Bennett,K]

d. Humean supervenience

17661 We invent the patterns in reality [Goodman]
16210 The world is just a vast mosaic of qualities [Lewis]
16211 Is a rotating disc undetectable? [Hawley]
16243 The Humean view ignores the physics [Maudlin]
16271 Not supervenience; the Mosaic is everything! [Maudlin]
16273 The Mosaic itself must be left inexplicable [Maudlin]
16275 There can't exist a 'homogeneous disc' [Maudlin]
19012 Humean supervenience excludes modality [Vetter]

6. Fundamentals

simple foundations as the basis for the structure of reality

a. Fundamental reality

17995 Matter, then contraries, and then elements [Anaxagoras]
15300 Fundamental particulars can't change [Harré/Madden]
14941 Just patterns, and no fundamentals? [Ladyman/Ross]

b. Types of fundamental

15008 Is fundamentality holistic or atomic? [Sider]
15013 Fundamental existence, or nature? [Sider]

c. Monads

19405 Substances harmonise in what they express [Leibniz]
7565 There must exist basic immaterial monads [Leibniz]
5044 Animated substantial points exist [Leibniz]
13174 Even flint has a sort of appetite [Leibniz]
13175 Entelechies are analogous to souls [Leibniz]
12747 Monads situated but not extended [Leibniz]
12748 Only monads are substances [Leibniz]
5060 Substances are made of monads [Leibniz]
19377 Monads have bodies, and infinite degrees [Leibniz]
12774 A substantial chain links the monads [Leibniz]
12777 Monads need some chain to unify them [Leibniz]
12782 Monads are self-sufficient [Leibniz]
7644 Materialise soul; don't spiritualise matter [La Mettrie]
11857 Monads replaced Aristotelian continuants [Leibniz]
7843 Is urine really made of monads? [Voltaire]
12751 How do monads relate to bodies? [Garber]
19363 Monads change by a principle, and diversity [Leibniz]
19352 A 'monad' is a simple form of soul [Leibniz]
19385 Monads harmonise, by representing one world [Leibniz]
14869 If things experience, we are close to them [Nietzsche]
21226 Husserl sees the ego as a unified monad [Husserl]
12695 Atomists say body is sensible [Garber]
21105 1676: water is teeming with life! [Krauss]
21453 Monads are Kantian noumena [Gardner]

d. Logical atoms

12502 Basics are simple sensation and reflection [Locke]
21684 Atomic facts may be inferable from others [Russell]
21708 Atoms have particulars, universals, facts [Russell]
19051 The logical atoms are sense-data [Russell]
6089 Logical atoms are the target of analysis [Russell]
6100 There are facts about all the facts [Russell]
6105 Logical atomism aims at ultimate simples [Russell]
10968 Logical atomism hits recalcitrant propositions [Russell]
6113 Assert facts, and name simples [Russell]
6114 'Simples' are inferred, not experienced [Russell]
21722 Only construct from what is known [Russell]
21681 Every truth is deducible from the basics [Russell]
6419 In 1900 I adopted logical atomism [Russell]
6438 Complexes can be known, but not simples [Russell]
7090 'Tractatus' is extreme logical atomism [Wittgenstein]
21682 Logical atoms can't be contradicted [Wittgenstein]
21683 Nothing can be inferred from the atoms [Wittgenstein]
18385 Are there possible atomic ingredients? [Armstrong]
18475 Complex facts, or only atomic facts? [MacBride]

7. Abstract/Concrete

defining the border between the concrete and abstract

a. Abstract/concrete

12966 Abstract and concrete term families [Leibniz]
10539 Frege only refers to 'concrete' in passing [Frege]
11093 Is 'red' abstract because discontinuous? [Quine]
1630 Language commits us to our own ontology [Quine]
10515 Concrete reference is direct, abstract not so [Dummett]
10540 Light concrete, but radio waves abstract? [Dummett]
10544 Is a regular wind concrete or abstract? [Dummett]
10546 Sharp concrete/abstract divide is unnecessary [Dummett]
9884 Concrete/abstract is a sliding scale [Dummett]
9210 Abstract and concrete are not incompatible [Fine,K]
10577 Abstracta are mostly essence [Yablo]
10578 Concreta a posteriori, abstracta a priori? [Yablo]
9918 Abstract/concrete is a distinction of kind [Burgess/Rosen]
9929 Concrete talk is full of abstractions [Burgess/Rosen]
10227 Abstract/concrete now seems blurred [Shapiro]
10226 Maths divides concrete/abstract differently [Shapiro]
9619 Paintings can be concrete AND abstract [Brown,JR]
10512 Concrete is perceptible, causal, located [Hale]

10517 Are colours or points concrete/abstract? [Hale]
10519 Abstract/concrete involves name-relations [Hale]
10520 Token-words concrete, type-words abstract [Hale]
8953 Do abstractions depend on all concreta? [Szabó]
13744 There is a concrete cosmos, plus abstraction [Schaffer,J]
14934 Concrete and abstract are too crude [Ladyman/Ross]
10493 Abstract/concrete is a misfit in physics [Ladyman/Ross]

b. Levels of abstraction

10502 Higher degree abstractions represent more [Arnauld,A/Nicole,P]
9578 Is abstraction ignoring presented properties? [Frege]
10563 Maybe abstraction is in ordered stages [Fine,K]
9927 Mathematical abstraction steadily ascends [Burgess/Rosen]
9930 Abstraction levels go from sets to formulas [Burgess/Rosen]
10524 Steps of abstraction create a hierarchy [Hale]

8. Stuff

physical existents which does not involve individual things

a. Pure stuff

16771 Composite can unite, if the essence is one [Scheibler]
6472 Continuity establishes rocks, but not fluids [Russell]
16939 Masses have spread without individuation [Quine]
15319 Fluids are as much 'things' as blocks are [Harré/Madden]
15501 Reality is individuals and classes [Lewis]
15504 Gunk is an individual with endless parts [Lewis]
17578 Drop 'stuff', and just use 'particles' [Inwagen]
12793 Ontology began with masses, not objects [Benardete,JA]
13386 Stuff and things aren't really different [Jubien]
13488 Masses have no plurals or numbers [Hart,WD]
15014 Stuff has different mereological rules [Sider]
12847 'Much' but not 'many' for masses [Simons]
12863 Mass terms are indifferent to division [Simons]
12862 Gold is not the same as its atoms [Simons]
12792 Stuff and reference don't mix [Laycock]
12799 Stuff descriptions aren't singular or plural [Laycock]
17436 Snow is what persists through its changes [Koslicki]

b. Mixtures

14503 Mixtures lacking proportion are ruined [Plato]
15857 A proper mixture requires proportion [Plato]
15320 Fields coincide without merging [Harré/Madden]
12858 Mixtures need similar quantities of stuff [Simons]
12859 Mixtures have their own qualities [Simons]
12818 Water parts lose identity in mixtures [Laycock]
16727 Four elements cease to exist in mixtures [Pasnau]

D. Theories of Reality

1. Realism

commitment to the existence of a reality outside our minds

7953 Cut nature accurately at the joints [Plato]
12568 God guarantees externals [Locke]
12741 Dreams will do, if they survive reason [Leibniz]
12740 Good predictions prove reality [Leibniz]
13184 Natural divisions create appearances [Leibniz]
13188 Agreements are what indicate reality [Leibniz]
7416 Are phenomena contrained or free-floating? [Talbot]
22014 We don't 'represent' pain or the self [Schulze]
22059 The thing-in-itself is an abstract fiction [Hegel]
22083 Categories reveal things in themselves [Hegel]
21470 The will is thing-in-itself [Schopenhauer]
21492 Science is realist [Peirce]
19240 Realism assumes reason matches being [Peirce]
19239 Realism is our only hope of knowledge [Peirce]
7153 Being is unknown, so realism is impossible [Nietzsche]
20726 Distinguish self from non-self needs reality [Colvin]
20727 Common-sense realism is practical [Colvin]
21538 Two people can only see an external object [Russell]
17545 Exact science does not need dogmatic realism [Heisenberg]
18900 Logic can say that facts exist [Sommers]
6280 Realism explains language and science [Putnam]
17644 Realists believe in one true final theory [Putnam]
2349 Truth is matched, separate, rigid and unique [Putnam]
9869 Realism is just two-valued semantics [Dummett]
15049 Realism is a weak commitment to bivalence [Dummett]
8184 Only invoke reality if language requires it [Dummett]
14896 Kripke blocked a slide into sociology [Kripke]
16523 Our interests affect our concepts [Wiggins]
16524 We is only grasped through individuation [Wiggins]

2781 Realism sees some perceived properties as real [Dancy,J]
2968 How does commonsense realism see things AS? [Lockwood]
7045 Realism says concepts can 'cut at the joints' [Heil]
14334 Reality exists; can we describe it? [Mumford]
18692 Objects, correspondence, fallible theories [Button]
18881 Realists say truths are grounded in the world [Cameron]
18875 Realist discourse is T or F, and some of it T [Cameron]
18878 Realism is mind-independence [Cameron]

2. Reality

sort of reality to which realists are committed

6562 Forms are Parmenidean, appearance Heraclitean [Plato]
221 We cannot know the forms [Plato]
12095 Actual knowledge is of particulars [Aristotle]
6262 Our lack of sense may conceal some of reality [Montaigne]
12752 Only unities have any reality [Leibniz]
21926 Schopenhauer says reality ideal and irrational [Schopenhauer]
10352 The real is a community consensus [Peirce]
22202 The World is all experientiable objects [Husserl]
5370 Real space is neither touch nor sight [Russell]
22161 Readiness defines the reality of things [Heidegger]
13934 'Real' is only within some system [Carnap]
17659 Reality is largely a matter of habit [Goodman]
8507 Reality is facts/states of affairs, not things [Armstrong]
12598 Reality is what true theories share [Harman]
2329 Causal power is the mark of what is real [Kim]
7974 Where will the eclipse of reality leave us? [Baudrillard]
6082 Reality as causal excludes modality [McGinn]
1605 Is reality simple or just an object of desire? [Roochnik]
15047 Reality is decided by grounding [Fine,K]
15046 Reality is metaphysically primitive [Fine,K]
15048 Is reality factual, or fundamental? [Fine,K]
15060 Why is the basic more real? [Fine,K]
15072 Three levels of fact, in time and world [Fine,K]
9211 Is there realism without a privileged view? [Fine,K]
21660 Reality is the facts, or the things [Hofweber]

3. Anti-realism

either denial of external reality, or of its having knowable structure

5953 Experience gives no certainty of reality [Aristippus young]
18876 Berkeley just doesn't know what trees are [Berkeley]
19386 Without us there is no space or time [Kant]
21445 Perfect intuition can't reach the things [Kant]
4167 The knower and the world are unknowable [Schopenhauer]
6949 Doubting reality is not true dissatisfaction [Peirce]
18316 Anti-realism rests on realism [Nietzsche]
22213 Absolute reality is an absurdity [Husserl]
20730 Changing appearances need one object [Colvin]
20729 Anti-realist assume the thinker's reality [Colvin]
20731 Relations can't be all; they're part of things [Colvin]
7545 Visible objects only exist when viewed [Russell]
17538 Minds are not part of atomic events [Heisenberg]
17657 We ignore misfits in our world [Goodman]
9943 Ignorance of truth doesn't eliminate truth [Putnam]
22181 Anti-realism can't explain good prediction [Putnam]
14214 Causal links are 'just more theory' [Putnam]
14205 Sentences stay true under reinterpretations [Putnam]
17648 There isn't just one good theory of reality [Putnam]
3303 Anti-realism sees reality as unstructured [Dummett]
8185 Only apprehended worlds make sense [Dummett]
8192 Truths of the past are more than verification [Dummett]
8596 Measurement and length equality differ [Shoemaker]
8597 If we all sleep, does the earth still rotate? [Shoemaker]
14213 World is unreal, undivided, unreferable... [Lewis]
7065 What is the ontology of language? [Heil]
10410 Can anti-realism explain measurement methods? [Swoyer]
9601 The realist/anti-realist debate is hopeless [Williamson]
14306 Evidence and ontology are inseparable [Mumford]
4711 Waves and particles are incompatible [O'Grady]
6780 The best anti-realism concerns laws [Bird]
18693 Any true theory has multiple versions [Button]
18695 Ideal theories must have a true model [Button]
19109 Can we reach indefeasible conclusions? [Misak]
12397 Said Plato: 'The things...' [Sommers,W]

4. Naturalism

there is nothing beyond what we call 'nature'

21268 Nature can explain everything, without God [Aquinas]

20127 Understanding rests on laws of nature [Spinoza]
20123 Fit humanity into a non-human nature [Nietzsche]
18391 Naturalism says there's just space-time [Armstrong]
3509 Externalism is the essence of naturalism [Papineau]

5. Physicalism

reality consists entirely of material things in space-time

1641 Some claim only touchable things exist [Plato]
11256 Materialists cannot explain change [Aristotle]
14048 The cosmos needs not help from gods [Epicurus]
7559 Every part of the universe is purely body [Hobbes]
5287 Philosophy resolves into empirical facts [Marx/Engels]
18438 Events are just physical redistributions [Quine]
10243 There's just particles, and classes of classes [Quine]
3454 Reality is entirely physical particles [Searle]
3437 Physical facts determine all the facts [Kim]
15318 No 'material' in physical fields! [Harré/Madden]
8580 Materialism: all change needs physical change [Lewis]
16054 Physicalism is more than mere supervenience [Horgan,T]
16055 Materialism needs causally complete physics [Horgan,T]
7855 If 'physical' is vague, physicalism is empty [Mellor/Crane]
6504 Relations are spatial, temporal or causal [Robinson,H]
16048 The physical fixes the positive facts [Chalmers]
16060 Nonreductive materialism: dependence of levels [Lynch/Glasgow]
16064 Causal reduction marks true physicalism [Lynch/Glasgow]
14909 Physicalism: part-whole, or supervenience [Ladyman/Ross]
16049 Physicalism allows a necessary divinity? [Bennett,K]

6. Fictionalism

much of ontology is actually convenient fictions we create

14429 Classes are logical fictions [Russell]
9497 Armstrong gives a fictionalist view of laws [Bird]
8909 Abstraction is ignoring features of objects [Lewis]
10023 Mirror-image talk is 'encoded fictions' [Hodes]
19489 A fiction is true within a thing-framework [Yablo]
19490 Make-believe helps us think more clearly [Yablo]
19491 Clouds can be 'angry', if emotions are assumed [Yablo]
8864 Existing abstracta clarify logic [Yablo]
19494 Our fictions may be tracking the facts [Yablo]
10262 Fictionalism still needs the possible [Shapiro]
10277 Structuralism blurs abstract and physical [Shapiro]
12445 Fictions aren't even abstract objects [Azzouni]

7. Facts

aspects of reality taken to have objective existence

a. Facts

14778 Facts are hard, independent things [Peirce]
21709 Facts are just what propositions assert [Russell]
6111 We can't infer fact structure from language [Russell]
6434 Facts are either relations or qualities [Russell]
7610 A fact is what it is rational to accept [Putnam]
18488 We explain events by citing facts [McFetridge]
8386 Descriptions name events, sentences name facts [Crane]
17287 Facts can be 'fused' together into one [Fine,K]
8314 Are facts abstract, or partly concrete? [Lowe]
8316 Abstract facts can't have a causal role [Lowe]
8318 What binds the constituents into a fact? [Lowe]
8323 How many facts learned before breakfast? [Lowe]
15137 If 'fact' is a noun, can we name facts? [Williamson]
4698 Facts need concepts to describe them [O'Grady]
14095 Facts are structures of worldly items [Rosen]
5736 Modal facts are very hard to express [Melia]
5735 Names and predicates capture all facts [Melia]
21661 There are probably ineffable facts [Hofweber]
18916 Facts are properties of the world [Engelbreten]
17267 How fine-grained are identical facts? [Correia/Schnieder]

b. Types of fact

21673 Simple facts, and dependent complex facts [Chrysippus]
18376 There are four types of fact [Russell]
18737 There are no positive or negative facts [Wittgenstein]
15201 The Queen's being dead is a 'general fact' [Prior,AN]
17688 Negative facts are just positive facts [Armstrong]
8163 Facts of non-existence lead us to atoms [Dummett]
6075 There are three views of facts [McGinn]
19322 Disjunctive, conditional, negative facts! [Kirkham]
15071 Two realms, of tensed and tenseless facts [Fine,K]
10367 There is only one fact - the True [Schaffer,J]
15338 Atomic facts yes, but big complex ones? [Horsten]

17293 Conceptual facts, unlike worldly, need concepts [Audi, P]

c. Facts and truths

19471 A fact is a thought that is true [Frege]

5418 A mindless world has facts but not truths [Russell]

13988 All facts could in principle be stated [Ryle]

8161 We know that facts can be stated [Dummett]

19278 There is no gap the fact and the truth [Hale]

d. Facts rejected

4525 No facts, only interpretations [Nietzsche]

4543 There are no facts-in-themselves [Nietzsche]

8313 Facts are needed, but are hard to identify [Lowe]

8. States of Affairs

reality as a collection of complex situations

5465 Trope theory is similar to logical atomism [Russell]

15809 State of affairs pertain through properties [Chisholm]

15828 Events and propositions are two states [Chisholm]

15829 A state of affairs must be acceptable [Chisholm]

18374 Truthmaking needs states of affairs [Armstrong]

15267 Events are changes in states of affairs [Harré/Madden]

15543 What unites a state of affairs? [Lewis]

15009 Concrete or abstract states of affairs [Sider]

9. Vagueness

difficulties in pinning down exactly what exists

a. Problem of vagueness

21598 Austin revealed many meanings for 'vague' [Austin, J.L.]

21589 Without bivalence we lose classical logic [Williamson]

21596 Vagueness undermines logical stability [Williamson]

21601 Vague terms can cover precise things [Williamson]

b. Vagueness of reality

13187 In actual things nothing is indefinite [Leibniz]

21628 Reality itself cannot be vague [Dummett]

6978 Baldness is indeterminate, unlike hair [Jackson]

7987 Nothing is true, but everything is exact [Baudrillard]

16129 Vague objects imply contradiction [Evans]

16459 Vague reality and vague objects? [Evans]

16457 There clearly are vague identity statements [Evans]

16460 Evans assumed that his proof was wrong [Evans]

8983 Red things have no set; it is too vague [Sainsbury]

9064 Mount Everest has naturally fuzzy boundaries [Keefe/Smith]

21629 Fuzziness doesn't entail vagueness [Williamson]

9599 Mountains are vague, so don't exist? [Williamson]

16219 Non-linguistic things can't be indeterminate [Hawley]

16223 Real vagueness needs vague foundations? [Hawley]

6135 It is unintelligible to say a statue is vague [Merricks]

c. Vagueness as ignorance

12516 Vagueness in simple ideas is our fault [Locke]

12517 Close ideas can't all be named [Locke]

9044 More information won't settle borderline-tall [Keefe/Smith]

9048 The epistemic view retains classical logic [Keefe/Smith]

9055 Why don't we know predicate boundaries? [Keefe/Smith]

21591 Vagueness is epistemic [Williamson]

21619 Do omniscient speakers know all boundaries? [Williamson]

21620 The essence of vagueness is ignorance [Williamson]

21622 Ignorance of borderline vs word usage? [Williamson]

9120 A vague concept cannot be discriminated [Williamson]

6863 No knowledge close to conceptual boundaries [Williamson]

16226 Vagueness of persons is epistemic [Hawley]

9116 Vague words have hidden boundaries [Sorensen]

d. Vagueness as linguistic

17431 Vagueness is incomplete definition [Frege]

9051 Natural language is too vague for logic [Russell]

9054 Only representations can be vague [Russell]

19042 Terms learned by ostension tend to be vague [Quine]

8180 A-or-B might be true, but not-A and not-B [Dummett]

9052 Vague predicates lack application [Unger]

9057 Vagueness is semantic indecision [Lewis]

9671 We decide whether France is hexagonal [Lewis]

16458 Semantic vagueness is rival precisifications [Lewis]

15538 Vagueness is semantic indecision [Lewis]

17582 Predicates make singular terms vague [Inwagen]

12023 Sharp semantics meets vague language? [Forbes, G.]

9768 Vagueness is a deficiency in meaning [Fine, K.]

21614 Maybe 'heap' is not a legitimate concept [Williamson]

21617 Maybe vagueness means no proposition [Williamson]

21618 Vagueness are true in conditionals [Williamson]

21625 Fixing the context may not settle it [Williamson]

11016 Is non-vague language even usable? [Read]

e. Higher-order vagueness

9776 The vaguely vague is higher-order vagueness [Fine, K.]

21590 'Clearly old?' involves higher-order vagueness [Williamson]

f. Supervaluation for vagueness

9767 Make vagueness precise to produce truth [Fine, K.]

9770 Three-value vagueness kills logic [Fine, K.]

9772 Meaning is actual and potential [Fine, K.]

9773 The super-truth view saves classical logic [Fine, K.]

9774 Borderline cases must be under our control [Fine, K.]

9049 Supervaluation increases the precision [Keefe/Smith]

9056 Increase precision, or no truth value [Keefe/Smith]

9058 Supervaluation won't save all of logic [Keefe/Smith]

9059 Supervaluation has non-classical semantics [Keefe/Smith]

9060 Is vagueness failure to make things precise? [Keefe/Smith]

21592 Supervaluation keeps logic, but shifts truth [Williamson]

21603 Vague language is not precisely describable [Williamson]

21604 Supervaluation makes admissibility true [Williamson]

21607 Supervaluation: excl middle but not bivalence [Williamson]

21608 No complex truth-functions in supervaluation [Williamson]

21609 Validity is unclear in supervaluation [Williamson]

21610 Supervaluation adds a 'definitely' operator [Williamson]

21613 Supervaluation can't do higher-order [Williamson]

16208 Satisfy with a range, not with one value? [Hawley]

16221 Supervaluation follows indecision-resolving [Hawley]

11012 Supervaluations extend truth-values [Read]

11013 Supervaluations sometimes fail [Read]

11019 Supervaluation offers an arbitrary cut-off [Read]

13692 'Precisification' makes the trivalent bivalent [Sider]

13693 Supervaluation narrows down the vagueness [Sider]

13694 Truth is 'true-on-all-sharpenings' [Sider]

13695 Supervaluational logic is usually classical [Sider]

15362 Disjunctions of vaguenesses are true [Horsten]

15363 Do the disjuncts fix a disjunction? [Horsten]

g. Degrees of vagueness

21594 Stoics applied bivalence to the sorites [Stoic school]

14742 An identity of x and y can't be vague [Salmon, N.]

9050 Give vagueness a third or fuzzy value [Keefe/Smith]

9061 People cannot be fully ordered by niceness [Keefe/Smith]

9062 Is anyone 'completely tall'? [Keefe/Smith]

9063 How is a degree of redness to be decided? [Keefe/Smith]

8946 Could million-valued logics solve sorites? [Fisher]

10. Ontological Commitment

existence commitments of language and theories

a. Ontological commitment

10784 All speech is about something [Plato]

13879 Ontology is settled by syntax [Frege]

6060 Existence is truth of propositional functions [Russell]

13938 Choose a framework, but then you're committed [Carnap]

8496 Existence doesn't depend on language [Quine]

11101 Singular terms with substitution commit us [Quine]

19485 Names don't commit; we can always deny them [Quine]

10667 All truths must be logically expressible [Quine]

15785 We commit to ontology - and to ideology [Hintikka]

10548 Context principle makes 'exists' univocal [Dummett]

10281 Our language fixes our objects [Dummett]

18211 Expand logic to reduce commitments? [Field, H.]

12226 'Pegasus is Pegasus' may be true [Hale/Wright]

7678 Ontology includes the needs of semantics [Jacquette]

8258 Basics are substances, or facts? [Lowe]

8301 Abstractions exist with no causal powers [Lowe]

12449 Ontology from logical form? [Azzouni]

10643 'Ideological' and 'ontological' commitment [Linnebo]

10668 Only 'groups' of children sit in circles [Hossack]

14491 Rival ontologies can both be true [Thomasson]

18770 Ontological and Existential commitment? [Anderson, CA]

b. Commitment of quantifiers

2611 Quantification has a commitment to existence [Ayer]

1610 To be is to be the value of a variable/pronoun [Quine]

19486 Quantifiers can commit to real numbers [Quine]

5747 No entity without identity [Quine]

16963 Existence by quantifiers, not constants [Quine]

10700 Second-order has no new commitments [Boolos]

13877 Singular terms commit to objects [Wright, C.]

12213 Ontology is universal, not existential [Fine, K.]

12440 Ontological commitment in metalanguage? [Azzouni]

c. Commitment of predicates

10642 Commitment to objects and to concepts [Frege]

16021 Expand ideology, but not ontology [Quine]

16964 Predication involves commitment to objects [Quine]

10747 Ontological commitment is uninformative [Oliver]

10748 Commitment may not be by reference [Oliver]

d. Commitment of theories

8459 Study ontology in science, not in fiction [Quine]

8497 Like science, ontology seeks simple schemes [Quine]

3325 Just reference, predication, quantification [Quine]

4216 Ontology is variables of logical theories [Quine]

18966 Commitment needs classical quantification [Quine]

18964 Ontology is a doubly relative activity [Quine]

15002 Adverbs imply that events exist [Davidson]

18505 Ontology is the precondition of theories [Heil]

14983 Accept your ontology - and its carvings [Sider]

16258 If a theory is true, commitment means ontology [Maudlin]

14489 Avoiding terms won't avoid commitment [Thomasson]

e. Ontological commitment problems

19446 Language looks unreal, to our consciousness [Feuerbach]

18775 Descriptions don't commit ontologically? [Russell]

16261 No predicates in ontology if it's first-order! [Maudlin]

7698 We must know the values to assign to variables [Jacquette]

19492 'Literal' fixes ontology - and vice versa! [Yablo]

14490 There can be commitment without quantification [Thomasson]

13417 Unwanted maths is still maths [Parsons, C.]

13409 A scientific commitment may be unjustified [Papineau]

9558 Science always confirms maths so can't test it [Sober]

18499 Quantified truths don't reveal truthmakers [Heil]

18205 Atoms were needed, but not accepted [Maddy]

9559 Do failed theories disconfirm mathematics? [Chihara]

9566 Science doesn't need mathematical objects [Chihara]

16259 Formal translation might change ontology [Maudlin]

12438 Ordinary speech doesn't commit ontologically [Azzouni]

12441 You can't get new ontology from semantics [Azzouni]

10637 Speakers posit non-ontological objects [Linnebo]

E. Categories

1. Categories

general ideas about how to group what exists

16661 Categories are things and circumstances [Boethius]

21448 Categories conceptualise object experience [Kant]

5554 Categories do more than coincide with nature [Kant]

22078 Sensation propositions involve categories [Hegel]

15634 Particular thought requires categories [Hegel]

21920 Use reasons, not a priori categories [Schopenhauer]

16961 Categories are ranges of variables [Quine]

13127 Categories are separate, or included [Sommers]

13403 Categorise Venus under 'good-sized object' [Jubien]

17377 All descriptive language is classificatory [Dupré]

8283 Ontological categories precede natural kinds [Lowe]

13117 How far down do categories go? [Westerhoff]

13116 A criterion of identity fixes a category [Westerhoff]

13118 Categories are basic bits of states of affairs [Westerhoff]

13124 Category order: containment or generality? [Westerhoff]

13125 Substitutions: false, or meaningless? [Westerhoff]

13126 Categories systematize three intuitions [Westerhoff]

13130 Generalised categories lack a cut-off [Westerhoff]

10496 Categories may not need defining features [Ellen]

10497 Symbolic categories involve rules [Ellen]

2. Categorisation

how the mind approaches putting things into categories

13775 Cutting needs appropriate tools [Plato]

16121 One encompassing many is wonderful [Plato]

13435 We can't categorise by unknown essences [Locke]

12535 Category is by appearance not essence [Locke]

6160 Are categories impositions or restrictions? [Rowlands]

4048 Infant brains have inbuilt ontology [Goldman]

8986 Classify by paradigms, not pigeon-holes [Sainsbury]

17376 Classification should be informative [Dupré]

4913 Brain damage eliminates whole categories [Carter, R.]

15682 Quite simple animals employ categories [Gelman]

15691 Kids accept hidden explanatory categories [Gelman]

13131 Everything should have a category [Westerhoff]
10494 Words are not good guides to categories [Ellen]
18573 We have several concepts per category [Machery]
18602 Classify by causal laws of the category [Machery]
18604 Are quick and slow categorisation the same? [Machery]

3. Proposed Categories

actual suggestions for structure of categories
13121 Aristotle offers ten categories [Aristotle]
3311 The Aristotelian categories seem incomplete [Benardete,JA]
11035 Thinking has ten categories [Aristotle]
12267 We can list the ten categories.. [Aristotle]
12347 Being is divided into genera [Aristotle]
16652 Stoics just have four categories [Chrysippus]
20824 Substrates, qualities, dispositions, relations [Stoic school]
6036 The Stoics reduced the categories to four [Stoic school]
16657 Three main categories, the rest dependent [Henry of Ghent]
12993 Make do with five categories of being [Leibniz]
14163 Build basic existence on instants and points [Russell]
7533 Just propositions, individuals and universals [Russell]
13120 Continget/necessary; individual/state/non-state [Chisholm]
16526 Classifications could be insane! [Wiggins]
11929 Objects, properties and relations [Molnar]
6529 The role/occupant distinction is basic [Lycan]
7683 Are objects just properties, or separate? [Jacquette]
7684 States and worlds are just objects+properties [Jacquette]
2401 Reality is basically physics, minds and laws [Chalmers]
8284 Three candidates for the top category division [Lowe]
13122 Universal/Particular; kind/concrete/abstract [Lowe]
4196 Universal/particular, or abstract/concrete? [Lowe]
8458 Nominalism, Extensionalism or Intensionalism? [Orenstein]
13123 Norm:property/relation/entity/abstracta/set/.. [Westerhoff]

4. Category Realism

belief that our categories can or do map reality
16116 Our basic questions suggest the categories [Aristotle]
16655 Categorise by predicates - hence by reality [Aquinas]
12989 Our limited truths are accurate [Leibniz]
21754 Our categories disclose the world [Hegel]
21755 Our categories shift with history [Hegel]
16462 Categories are just the best notation [Quine]
16185 Causality indicates which properties are real [Cartwright,N]
18512 Ontology specifies fundamental categories [Heil]
13739 Categories are modes of dependence [Schaffer,J]
17728 Concepts vital for classifying reflect reality [Jenkins]
18921 Inclusive categories match our semantics [Engelbreitsen]

5. Category Anti-Realism

belief that our categories can't or don't map reality
20896 We can't know what sort everything is [Democritus]
16608 Ockham rejected the categories [William of Ockham]
16654 Our conceptual scheme is inaccurate [William of Ockham]
13436 The natural continuum has no gaps [Locke]
22079 Categories are historical and cultural [Hegel]
7174 Categories are inventions, not truths [Nietzsche]
7175 Philosophers seem trapped in the categories [Nietzsche]
4484 Categories of reason are dangerous fiction [Nietzsche]
17654 Variety in worlds depends on sorting [Goodman]
11096 Discourse departmentalizes itself [Quine]
21907 We need many sets of categories [Deleuze]
15730 Nominalists classify arbitrarily [Quinton]
4574 If categories are essential, we all have them [Cooper,DE]
7020 Concepts don't carve up the world [Heil]
13115 Categories are axioms, not absolutes [Westerhoff]
13119 Categories are conventional, not intrinsic [Westerhoff]
13135 Category is relative, and hence contingent [Westerhoff]
10495 We sometimes must impose boundaries [Ellen]
18565 Some categories are ad hoc, like case contents [Machery]

8. Modes of Existence

A. Relations

1. Nature of Relations

what we should understand a relation to be
16656 Separations also have a direction [Aristotle]
21345 Aristotle said relations are accidents [Aristotle]
16658 There's nothing real in the Relations category [Henry of Ghent]
16659 Relations are real, but not an extra reality [Olivi]

18528 'Intervals' between things are just mental [Auriol]
18529 Relations are expressed in two ways [William of Ockham]
10419 Some say relations can be eliminated [Leibniz]
13078 Relations aren't in the entities [Leibniz]
19383 A distant wife's death means a real change [Leibniz]
21346 Ratios can't be features of two lines [Leibniz]
13498 Peirce began the mapping of relations [Peirce]
21341 Philosophy of logic reintroduced relations [Russell]
21534 All we can say is relations relate [Russell]
21540 Relational propositions aren't about relations [Russell]
21562 Complexity and truth need relations [Russell]
5371 We know relations better than actual things [Russell]
5407 'North of' is a non-mental universal [Russell]
21576 Asymmetric relations are not reducible [Russell]
14217 Relations have some places, in some order? [Fine,K]
14216 Relations have some places, in any order? [Fine,K]
14218 Piled blocks have one relation, not two [Fine,K]
14219 Language imposes directions on roads [Fine,K]
14220 Which first, biased or unbiased relations? [Fine,K]
21339 Formal relations don't capture the ontology [Heil]
21349 Height relates properties, not people [Heil]
21340 Maybe everything reduces to relations [Heil]
18508 Relations don't independently exist! [Heil]
13076 Relations are separate predicates [Cover/O'Leary-Hawthorne]
13683 Relations are features of grouped objects [Sider]
21354 Can we directly perceive internal relations [MacBride]
14009 Both relata must exist for a relation [Boume]
14010 Object relations are spatio-temporal or causal [Bourne]
14926 Uninstantiated relations are universals [Ladyman/Ross]
14929 Surely relations imply that relata exist? [Ladyman/Ross]

2. Internal Relations

relations as intrinsic features of the things that are related
21347 Being taller than something is not intrinsic [Plato]
22080 Categories relate themselves to another [Hegel]
6422 Internal relations are intrinsic to items [Bradley]
7966 External relations imply an infinite regress [Bradley]
21342 Internal relations are essential to relata [Moore,GE]
7968 Internal relations appear necessary [Wittgenstein]
7969 The order of numbers is an internal relation [Wittgenstein]
21351 Truthmaking is an obvious internal relation [Heil]
21344 Having a and b gives their internal relations [Heil]
21348 The truthmaker for 6>5 is 6 and 5 [Heil]
18532 As powers, causal relations are internal [Heil]
21353 Internal relations need existence or character [MacBride]
7938 Relational properties are non-essential [Macdonald,C]
14925 Relations depend on relata-properties? [Ladyman/Ross]
18336 Internal relations need existence or qualities [Rami]

3. Structural Relations

relations that build the structure of existences
14502 Plato expresses structures mathematically [Plato]
14931 It is plausible that structures are basic [Ladyman/Ross]
13289 Structure: position,type,number and invariants [Koslicki]
14375 Structures from properties, without relations? [Jacobs]

4. Formal Relations

systematic and precise account of how relations work
a. Types of relation
10586 Reflexiveness is self-referring, and basic [Russell]
14430 Symmetric and transitive means reflexive [Russell]
14432 'Asymmetry' is incompatible with its converse [Russell]
17691 Nothing is genuinely related to itself [Armstrong]
14974 Euclidean relations:aRb, aRc, so bRc [Cresswell]
13543 Transitive-symmetrical won't give reflexive [Bostock]
13802 One-many and many-one relations [Bostock]
11927 Reflexive relations are ontologically monadic [Molnar]
18361 A reflexive relation can't be asymmetric [David]
21352 Multigrade relations vary in relata [MacBride]
13043 Relations are sets of ordered pairs [Potter]
7967 Property and substance are internally related [Macdonald,C]

b. Equivalence relation

10585 A symmetrical transitive relation is equality [Russell]
18465 Equivalence: reflexive, symmetric, transitive [Kunen]

c. Ancestral relation

10032 Backwards iteration derives an 'ancestral' [Frege]
12056 Ancestral relations are transitive [Wiggins]
10617 An ancestral creates a chain of relations [Smith,P]

B. Properties

1. Nature of Properties

what we should take a property to be
12282 Properties must exist sometime [Aristotle]
7935 There cannot be uninstantiated properties [Aristotle]
16161 Properties are just realisations of forms [Aristotle]
15109 Necessary and essential features are distinct [Aristotle]
16648 Action involves accidents, so they have being [Duns Scotus]
10606 Properties are characteristic functions [Frege]
8461 Objects embrace substances and modes [Quine]
15827 Properties can be rooted in other times [Chisholm]
15830 Some properties cannot apply [Chisholm]
7024 Properties are instantiated universals [Armstrong]
17679 Property instances are identical [Armstrong]
15550 Properties: contingent, multiply located [Armstrong]
13584 Property extensions can't be essential [Ellis]
15092 Properties are individuated causally [Shoemaker]
15095 Causation is essential and fixes a property [Shoemaker]
15097 Properties have causes essentially [Shoemaker]
6993 Red is a property, presented to humans [Jackson]
16443 Properties are their possible exemplifications [Stalnaker]
8571 Unlike universals properties are spread around [Lewis]
15735 Properties don't come in degrees [Lewis]
9656 Abundant properties are as bizarre as you like [Lewis]
15751 'Slept in by W' is some bed's property [Lewis]
9295 Not only substances have attributes [Teichmann]
11915 If there are atoms they produce all properties [Molnar]
10719 Particular/property has four conditions [Oliver]
10721 Are properties abstract or concrete? [Oliver]
10399 The self-identity property isn't a universal [Swoyer]
10416 Can properties have parts? [Swoyer]
14595 Can properties exemplify other properties? [Swoyer]
16230 Charge, mass and spin the only properties? [Hawley]
13795 We know properties by their contraries [Elder]
17989 Typed or type-free theory of properties? [Hofweber]

2. Need for Properties

why philosophy might need the concept of a 'property'
16155 Aristotle invoked properties, not generality [Aristotle]
17849 Things possess respects in which they differ [Aristotle]
15754 Laws are inexpressible without properties [Armstrong]
18372 Minimal truthmaking needs properties [Armstrong]
8568 Properties are just bits of laws of nature [Mellor]
15737 Properties are what fit in theories [Lewis]
18510 We need properties to explain the world [Heil]
10716 The laws dictate which properties there are [Oliver]
18430 Three reasons imply properties exist [Edwards]

3. Types of Properties

how properties might be divided into different groups
12264 Accidents can possibly not belong to a thing [Aristotle]
17170 'Attributes' constitute essences [Spinoza]
18378 Length 'determinable'; a mile 'determinate' [Armstrong]
18379 Linked determinates are incompatible [Armstrong]
5468 Properties are active or passive [Ellis]
5790 Parts cause new 'emergent' properties [Searle]
12229 Abundant AND sparse properties? [Hale/Wright]
10720 Particular/property: sui generis/construction? [Oliver]
12354 'Categorical' properties rest on categories [Wedin]
14333 Dispositions and categoricals are the same [Mumford]
14978 Intrinsic properties in possibly sole objects [Sider]
14413 There are analysable and primitive properties [Merricks]
9502 Is there just one fundamental property? [Bird]
18924 There are 'spatial distribution' properties [Cameron]
16732 Qualities: microphysical, phenomenal or powers [Pasnau]
19024 Determinate properties must be unique [Vetter]

4. Intrinsic Properties

properties that involve no other objects
18910 Study real subject/attribute connections [Aristotle]
15874 True properties create the qualities [Harré]
15456 Extrinsic imply other objects [Kim]
14979 'Being alone' is an extrinsic property [Lewis]
15454 Brother is less extrinsic than sibling [Lewis]
15742 Disjunctions can be unnatural-intrinsic [Lewis]
15741 Intrinsic properties include natural ones [Lewis]
15397 All necessary properties are intrinsic? [Cameron]

15398 Are coextensives all intrinsic or extrinsic? [Cameron]
15435 Immanent universals must be sparse [Lewis]
15400 Are 'intrinsic' and 'natural' circular [Lewis]
15458 Intrinsic properties stay fixed in duplicates [Lewis]
15459 Ellipsoidal stars have a dependent intrinsic [Lewis]
14093 'Intrinsic' properties depend just on a thing [Rosen]
6145 An object on its own has intrinsic properties [Merricks]
14088 Two views of an 'intrinsic' property [Linnebo]
15401 Intrinsicness arise from a thing's nature? [Cameron]
15393 Intrinsicness are independent of surroundings [Cameron]

5. Natural Properties

properties which constitute the natural world
7686 The only properties are existing ones [Aristotle]
13587 There is no property of 'fragility' [Ellis]
12673 Physical properties concern action [Ellis]
15728 Naturalness partly depends on observers [Quinton]
9407 Everyone can spot property classes [Quinton]
8543 Genuine changes reveal genuine properties [Shoemaker]
8551 To be known, properties are causal [Shoemaker]
8557 Direct observation shows real properties [Shoemaker]
15281 Predicates are connected, not independent [Harré/Madden]
10717 Natural properties analyse similarity [Lewis]
16217 Natural properties narrow predicate reference [Lewis]
8613 Demarcation fixes objects/natural properties [Lewis]
8585 Reference needs eligible natural referents [Lewis]
8586 Examine things to find natural properties [Lewis]
8589 Naturalness is just featuring in content [Lewis]
15460 All perfectly natural properties are intrinsic [Lewis]
15726 Natural properties do resemblance and powers [Lewis]
14996 Natural properties have all the virtues [Lewis]
15743 Natural properties and laws are circular? [Lewis]
15744 Natural properties and resemblance circular? [Lewis]
15740 My 'natural' properties aren't worldbound [Lewis]
15752 Define natural properties by a list? [Lewis]
16262 Sparse properties: universal, trope or natural [Lewis]
15451 Natural properties absent from this world? [Lewis]
11916 'Being physical' is second-order [Molnar]
4603 Must genuine properties figure in causal laws? [Heil]
10417 There are only first-order properties [Swower]
14933 Natural laws define the properties [Psillos]
16253 Unique differences show fundamental properties [Maudlin]
14932 Properties are simply causal relations [Ladyman/Ross]

6. Categorical Properties

actualised properties, rather than conditional ones
11032 Properties 'in' things, and 'of' things [Aristotle]
11038 Secondary substances reveal the primary [Aristotle]
9478 Dispositions may denote the categoricals [Armstrong]
12677 All basic properties are categorical [Armstrong]
13577 Categorical properties mostly spatio-temporal [Ellis]
9436 The property of 'being an electron' is bogus [Ellis]
5469 Categorical properties are basic [Ellis]
12665 I support categorical properties [Ellis]
12682 Categorical: space, time and number [Ellis]
12684 Categorical is non-causal, but causes [Ellis]
3430 Properties depend on resemblances [Kim]
7031 Properties: sets of actual and possible objects [Lewis]
8572 Any class of things whatever is a property [Lewis]
15464 'Categorical' properties produce confusion [Lewis]
11956 Categorical properties are non-powers [Molnar]
6520 If it is all relations, what is the ontology? [Robinson,H]
4617 There is no property of 'being a stone' [Heil]
18522 Categorical properties, and if-then properties [Heil]
4027 Properties permit resemblance or difference [Mellor/Oliver]
14315 Categoricals and dispositions both basic? [Mumford]
14332 Categorical is basic - four reasons for [Mumford]
14336 Categorical predicates lack functions [Mumford]
14194 Ontology is actual, not hypothetical [Sider]
9477 Categorical properties are not modally fixed [Bird]
9490 A property is no more than distinctive [Bird]
9495 We can't just define possible properties [Bird]
9492 Properties are undifferentiated quiddities [Bird]
14501 Categorical properties are in the actual world [Koslicki]
16733 17th C is categorical, not dispositional [Pasnau]

7. Emergent Properties

new properties only found at higher levels of existence
3471 Relations of elements may determine properties [Searle]
3472 Emergent properties contradict causation [Searle]
3432 Emergent properties are unpredictable [Kim]
3434 Emergent properties are mysteries, but causal [Kim]
2320 Causation can operate above mere physics [Kim]
3291 Emergent properties are not reducible [Nagel]
2469 Micro-complexity gives macro-stability [Fodor]
4082 Are there resultant and emergent properties? [Crane]
4083 Emergentism makes physics incomplete [Crane]
4612 Complex properties do not 'emerge' [Heil]
4615 Complex properties are not new properties [Heil]
18513 Emergent properties need substances [Heil]
14302 Being lead is an emergent property [Mumford]
14553 Weak emergence weird, strong seems impossible [Mumford/Anj]

8. Properties as Modes

properties as simply ways of existing
16644 Accidents are inseparable [Aristotle]
10947 Some properties have independent explanation [Aristotle]
14044 Accidental properties cannot be independent [Epicurus]
14045 Properties are not parts of bodies [Epicurus]
16645 Accidents have less being than a substance [Henry of Ghent]
16643 All accidents are suited to a subject [Bonaventura]
16641 Whiteness enables existing-as-white [Aquinas]
11201 Properties have an incomplete essence [Aquinas]
16665 Entities, and nonessential modifiers - modes [Suárez]
16666 A mode fixes the state of a quantity [Suárez]
16668 Modes exist, but not as substances [Gassendi]
16730 If matter is atoms, the rest is just modes [Gassendi]
16670 Accidents are modes of thinking of bodies [Hobbes]
17171 A 'mode' is an aspect of a substance [Spinoza]
16669 Everything is either a being or a mode [Malebranche]
18353 Modes relate to substances and universals [Lowe]
16662 Are properties real, or just modes? [Pasnau]

9. Qualities

perceived aspects of properties
16739 There are four species of quality [Aristotle]
16705 Whiteness is intrinsic, and can't emerge [Oresme]
15484 Properties are dispositions plus qualities [Martin,CB]
7007 Properties are dispositional and qualitative [Heil]

10. Properties as Predicates

properties as purely linguistic concepts
10956 Must circles be bronze if they are all bronze? [Aristotle]
4028 Fregean properties are too rare or numerous [Mellor/Oliver]
10317 Are qualities Fregean objects? [Frege]
8534 Predicates of truths lack commitment [Quine]
15804 x is F entails the 'being-F' property [Chisholm]
8780 Attributes are functions, not objects [Geach]
4034 Predicates aren't properties, they name them [Armstrong]
8535 No property if the predicate doesn't apply [Armstrong]
13582 'Being a methane molecule' is not a property! [Ellis]
15756 Truths don't always ascribe a property [Shoemaker]
15761 Properties are not predicate meanings [Shoemaker]
8564 Every property has a possible predicate [Mellor]
16471 I accept a hierarchy of nth-order properties [Stalnaker]
18433 Thought cannot encompass all the properties [Lewis]
8604 Language requires properties [Lewis]
15739 There are set-many abundant properties [Lewis]
15563 Properties are semantic, and abundant [Lewis]
7014 Random predicates can define properties [Fodor]
18443 A good predicate guarantees a property [Hale/Wright]
4587 Not all predicates designate properties [Heil]
7015 True predicates pick out real properties [Heil]
18533 Predicates can just mark determinables [Heil]
18540 Predicates match properties at the base [Heil]
10714 Predicates and terms mean properties [Oliver]
10715 Five main semantic theories for properties [Oliver]
13638 Properties are intensional, not extensional [Shapiro]
8273 'Partly broad' a relation, adverb, or segment? [Lowe]
14995 Sparse properties: universals, or natural [Sider]
9503 Abundant properties are concepts or predicates [Bird]
18432 Maybe predication is inexplicable [Edwards]

11. Properties as Sets

properties are just classes of certain objects
9127 There is not a set for each property [Russell]
21575 Groups can replace shared qualities [Russell]
15478 Properties are respects of resemblance [Martin,CB]
12672 Properties are discovered, so aren't sets [Ellis]
19173 'Is a member of' is just another predicate [Davidson]
9783 Attributes can be distinct, yet coextensive [Cartwright,R]
14499 Properties: possible and actual particulars [Lewis]
4038 Properties are sets of possible instances [Lewis]
15399 'Being F' is a set of possible objects [Lewis]
10723 Properties are modal sets [Lewis]
9653 A property is just the set of its instances [Lewis]
15733 Coextensives come apart in possibilities [Lewis]
15732 Different properties with the same set? [Lewis]
15734 Relative properties give relative sets [Lewis]
9655 Trilateral/triangular are always coextensive [Lewis]
16290 Properties are sets of possible individuals [Lewis]
15516 A property is any class of possibilities [Lewis]
7703 If we've got classes, we've got properties [Jacquette]
18511 Unlike sets, properties are causal [Heil]
10591 Just treat 'property' and 'set' the same [Shapiro]
21729 Properties as sets, or as set-conditions [Linsky,B]
10413 Necessary coextension identifies properties [Swower]

12. Denial of Properties

rejection of the category of properties
16621 Accidents are not parts of bodies [Hobbes]
4546 Properties are subjective sensations [Nietzsche]
6063 Russell can't say properties exist [McGinn]
7925 Properties can't be individuated [Quine]
10295 Replace properties with sets [Quine]
3322 There is no need to quantify over properties [Quine]
6078 Quine wanted classes instead of properties [Quine]
8479 Just 'all red things are coloured things' [Quine]
9017 Predicates are not names [Quine]
18439 Spread attributes can't be individuated [Quine]
7618 Only particulars exist [Putnam]
5456 Redness is not a property [Ellis]
8959 Properties can be eliminated from science [Field,H]
3906 Properties may be ontologically extravagant [Scruton]
4029 Why postulate properties at all? [Mellor/Oliver]
16263 Physics has no use for properties [Maudlin]
7965 Are infinite properties needed to know one? [Macdonald,C]
19121 Reduce properties to true formulas? [Halbach/Leigh]

13. Tropes

qualities are abstract particulars, not general properties
a. Nature of tropes
8511 Properties and relations are particulars [Stout,GF]
8508 A 'trope' is an abstract particular [Williams,DC]
8509 A world is just tropes and their connections [Williams,DC]
8510 'Is wise' means a sum holds a set-member [Williams,DC]
15483 Properties are tied to particular things [Martin,CB]
8537 Exact similarities put tropes into classes [Armstrong]
4444 Maybe properties exist, but as particulars [Armstrong]
18373 Non-transferable tropes attach necessarily [Armstrong]
9657 Tropes give a good account of similarity [Lewis]
15433 Tropes: non-recurring duplicating particulars [Lewis]
8513 Rednesses are separate if one can change [Campbell,K]
8514 Reds must be particulars to recur [Campbell,K]
8522 Tropes solve the Companionship Difficulty [Campbell,K]
8523 Tropes solve the Imperfect Community problem [Campbell,K]
8524 Tropes must have a shape and size [Campbell,K]
11928 Are tropes transferable? [Molnar]
8526 We can't just assume tropes are basic [Daly]
7042 Similarity is primitive, not partial identity [Heil]
10739 Redness is a set of tropes [Oliver]
10738 Tropes are not properties [Oliver]
10740 Uninstantiated tropes are rejected [Oliver]
10741 Particulars are wholes made from tropes? [Oliver]
10464 A trope is a bit of a property or relation [Bacon,John]
10465 Is tropism a one-category ontology? [Bacon,John]
10467 Individuals consist of 'compresent' tropes [Bacon,John]
8285 'Modes' shows dependence, unlike 'tropes' [Lowe]
4234 Tropes are real but unique properties [Lowe]
4235 Is a cushion just a bundle of tropes? [Lowe]

4236 Tropes are abstract, and can't exist alone [Lowe]
4461 Tropes are like Hume's 'impressions' [Moreland]
18431 Internal relations bind a trope-nucleus [Simons]
7934 Tropes are abstract, but not universals [Macdonald,C]
7958 Properties are sets of resembling particulars [Macdonald,C]
7972 Trope theory is not nominalist [Macdonald,C]
14605 Tropes are the same as events [Schaffer,J]
18864 Platonic and Socratic 'wisdom' are different [Tallant]

b. Critique of tropes

14327 How do tropes resemble each other? [Russell]
15480 Tropes are not parts forming bundles [Martin,CB]
8538 Trope theory needs further axioms [Armstrong]
4445 How do you group particular properties? [Armstrong]
15748 Tropes need something to unite them [Lewis]
15749 Duplication must be primitive for tropes [Lewis]
15750 Tropes cannot explain similarity [Lewis]
8527 Several tropes in one location? [Daly]
8528 Trope theory can't avoid 'instantiation' [Daly]
4611 An object isn't properties, it owns them [Heil]
10742 Can tropes be split into parts? [Oliver]
4483 Tropes can't identify non-existing beings [Loux]
8286 Tropes lack the identity of objects [Lowe]
8294 Identifying tropes from objects is circular [Lowe]
8295 Could a trope join a new bundle? [Lowe]
8296 Can two tropes coincide in space? [Lowe]
18352 Tropes must exist independently [Lowe]
12253 How are abstract tropes in space-time? [Oderberg]
4462 Colours are extended, and thus complex [Moreland]
4463 'Paint it red' is universal, not a trope [Moreland]
7959 Do trope-sets resemble in the same way? [Macdonald,C]
7960 Introducing tropes multiplies entities [Macdonald,C]

C. Powers and Dispositions

1. Powers

nature of underlying powers

5117 Heavy things are those which move down [Aristotle]
16113 Potentiality is a principle of change [Aristotle]
16114 'Dunamis' is best translated as 'power' [Aristotle]
15965 Powers are not occult [Boyle]
12477 Actions give the idea of 'power' [Locke]
12490 Power is active or passive [Locke]
12521 Only combination reveals powers [Locke]
12733 Power is conserved in causation [Leibniz]
12735 Everything has a fixed power [Leibniz]
12711 Movement has an immediate cause [Leibniz]
12959 Powers are mental, as seen in our minds [Leibniz]
12967 Power needs endeavour and aptitude [Leibniz]
13179 Monads are substances with powers [Leibniz]
11949 There may exist unknown powers [Hume]
11942 Power is possible action [Hume]
15312 We observe powers directly in things [Priestley]
20105 Storms are expressions of free powers! [Nietzsche]
15489 A non-interacting property is non-existent [Martin,CB]
18398 Space and time are not powers [Ellis]
13580 Causal powers have necessary actions [Ellis]
13598 Causal powers are often directional [Ellis]
15279 Energy in physics is for active powers [Harré/Madden]
15276 Powers are either stimulated or released [Harré/Madden]
15305 Some powers are variable, others not [Harré/Madden]
11932 Five features define powers [Molnar]
11933 A power's type is its manifestation [Molnar]
15148 Powers give non-membership explanations [Chakravartty]
14378 Science aims to explain powers [Jacobs]
14538 Powers explain several key ideas [Mumford/Anjum]

2. Powers as Basic

powers seen as the foundation of physical reality

15773 Actuality rests on what initiates process [Aristotle]
11387 Activity is the source of change [Aristotle]
18451 Dispositions reveal the hidden incorporeal [Porphyry]
16635 Minds are powers or forces [Descartes]
17195 Things persist by God-given force [Spinoza]
17011 Particles may just attract or repel [Newton]
12710 Bodies have both extension and powers [Leibniz]
13079 Substances contain their laws of operation [Leibniz]
12708 Substantial form is first active faculty [Leibniz]
12723 Force is the basis of substance [Leibniz]

12965 Action is occurrences within substances [Leibniz]
12999 There are primary and derivative powers [Leibniz]
12749 Forces are strivings of substances [Leibniz]
17534 Probability waves are quantitative 'potentia' [Heisenberg]
14329 Mental dispositions have no categorical base? [Price,HH]
15487 Qualityless dispositions explain properties [Martin,CB]
12676 Only causal powers explain causal powers [Ellis]
15218 Copper is defined by its dispositions [Harré/Madden]
15302 Analysis of natures ends in powers [Harré/Madden]
15303 The nature of a field is its powers [Harré/Madden]
9476 Dispositions more basic than causes [Bird]
11934 Physical things have intentionality [Molnar]
11947 All powers are ultimately intrinsic [Molnar]
11952 Subatomic particles just are powers [Molnar]
11953 Grounded and ungrounded powers [Molnar]
16556 What the medicine does is the cause [Machamer/Darden/Craver]
14294 Disposition: regularity or unknown property? [Mumford]
9446 Properties are just natural clusters of powers [Mumford]
17996 Powers basic, as particles lack structure? [Psillos]
14540 Only real powers are fundamental [Bird]
15127 How can categoricals explain dispositions? [Hawthorne]
12467 Powers don't derive from natural laws [Jacobs]
14555 Powers don't offer much explanation [Mumford/Anjum]

3. Powers as Derived

powers as products of something more basic

16740 Powers are just aptitudes, not causes [Zabarella]
16744 Obvious features explain all the powers [Descartes]
16734 Powers are just aggregates of properties [Hobbes]
15974 Whiteness is a power to produce an idea [Locke]
14296 We replace dispositions with mechanisms [Quine]
13568 Maybe no bottom structure explains powers [Ellis]
13586 Do dispositions have explanations? [Ellis]
15758 Properties give things their powers [Shoemaker]
8547 Properties give rise to powers [Shoemaker]
8549 Properties produce effects via powers [Shoemaker]
15094 Properties are basic, not power-clusters [Shoemaker]
15258 Powers are explananda, not qualities [Harré/Madden]
15120 Property relations are the powers [Lewis]
15554 Dispositions need properties as bases [Lewis]
15463 All dispositions must have causal bases [Lewis]
7023 Are powers caused by low-level qualities? [Heil]
14310 Dispositions are functional role properties [Mumford]
14316 Many categoricals for one disposition? [Mumford]
14317 Categorical bases cause dispositions [Mumford]
9450 Properties as powers leads to a regress [Bird]
9498 The essence of a potency involves relations [Bird]
14557 There exist complex powers [Mumford/Anjum]

4. Powers as Essence

powers as giving the essential nature of each thing

15658 Hidden harmony exceeds the visible [Heracitus]
16752 Sight is the essence of the eye [Aristotle]
16753 The function defines the actual house [Aristotle]
17206 Essence is the effort to persevere [Spinoza]
15976 Texture is essence, causing behaviours [Locke]
12750 Is force essential, or dependent? [Lenfant]
13095 Essence is a force and a law [Leibniz]
12714 Substantial form is the principle of action [Leibniz]
12713 Form has appetite to interact [Leibniz]
13087 A thing's essence is its real possibilities [Leibniz]
13168 Forms are forces like appetites [Leibniz]
13169 Primitive forces originate activity [Leibniz]
5056 Activity is essential to substance [Leibniz]
12722 Thought of things terminates in force [Leibniz]
12778 The chain contains powers [Leibniz]
12783 Entelechy of substance is force [Leibniz]
12050 Substances are active [Wiggins]
16755 Forms are clearly not active principles [Fine,K]
21350 Properties as powers makes causation internal [Heil]
12245 Essence is the source of behaviour [Oderberg]
12256 Essential and non-essential powers [Oderberg]
16767 Have metaphysical essence, but no powers [Pasnau]
17954 Possibilities, rather than necessities [Vetter]

5. Powers and Properties

relation between powers and our view of properties

15780 Potentiality in geometry is metaphorical [Aristotle]

12969 Peripheral powers give the qualities [Leibniz]
4544 Properties require effects on other things [Nietzsche]
15479 Properties give things powers [Martin,CB]
15488 Properties combine exhibition and action [Martin,CB]
18400 Properties have powers [Armstrong]
5481 Properties do more than classify, they act [Ellis]
12678 All genuine properties are dispositional [Shoemaker]
8545 Abstract properties are a separate problem [Shoemaker]
15757 Not all properties are dispositional [Shoemaker]
15759 Property-identity is causal power [Shoemaker]
15760 Properties are clusters of conditional powers [Shoemaker]
15762 Are powers and properties inseparable? [Shoemaker]
8552 Non-causal properties are eliminable [Shoemaker]
4040 Properties and causes are closely related [Shoemaker]
15765 Properties are both causes and effects [Shoemaker]
14534 Properties are powers, or bestow them? [Shoemaker]
3436 Identify properties by their causation? [Kim]
4079 Properties are causes [Crane]
18523 Which first, powers or qualities? [Heil]
18524 Properties are powerful qualities [Heil]
14313 All properties must be causal powers [Mumford]
14318 Intrinsic properties are just causal powers [Mumford]
15122 Two properties with the same powers? [Hawthorne]
15123 Are the powers of a property its essence? [Hawthorne]
15124 Could different properties have same powers? [Hawthorne]

6. Dispositions

tendencies in things to behave in certain ways

a. Dispositions

16735 17th c dispositions are just arrangements [Boyle]
14292 A non-occult theory of dispositions possible? [Goodman]
15723 Dispositions are vague without structures [Quine]
16948 Mechanisms by-pass 'similarities' [Quine]
15469 There are three classes of disposition [Martin,CB]
14330 Realism requires categorical dispositions [Armstrong]
13585 Dispositions are the basics of nature [Ellis]
5458 Physical properties are dispositions [Ellis]
16452 Dispositions have modal properties [Stalnaker]
14308 We can bring dispositions into existence [Dennett]
11943 If dispositions are causes, they are actual [Molnar]
7025 Are property dispositions built in or added? [Heil]
14293 Objects, substances, persons have dispositions [Mumford]
14298 Dispositions, occurrences or categoricals? [Mumford]
14326 Only dispositions must have that role [Mumford]
14583 Dispositionalism is a selection function [Mumford/Anjum]
16788 Matter plus dispositions, instead of forms? [Pasnau]
19021 Dispositions to acquire dispositions? [Vetter]

b. Dispositions and powers

12941 Power always implies action [Leibniz]
12312 Real essences are powers [Copi]
13596 Powers are dispositions to produce forces [Ellis]
13599 Powers dispose essences to cause things [Ellis]
12686 Casual power is a kind of disposition [Ellis]
8548 Dispositions are powers, not properties [Shoemaker]
11939 Unexercised and absent powers differ [Molnar]
14314 It is hard to say what a power will do [Mumford]
14325 Talk of dispositions, rather than of powers [Mumford]
14536 Powers and dispositions are the same [Mumford/Anjum]
16738 Scholastics reject non-actual powers [Pasnau]

c. Dispositions as conditional

15466 Changing powers block conditional analysis [Martin,CB]
15467 Circumstances undermine conditionals [Martin,CB]
15461 The stimulus kills a 'finkish' disposition [Lewis]
12613 Empiricists reduce things with dispositions [Fodor]
14312 Does a disposition entail a conditional? [Mumford]
14416 Disposition true, while conditional is false [Merricks]
9474 Finkish dispositions fizzle out [Bird]
9475 Pot with bomb - breaks, but not fragile [Bird]
14348 'Antidotes' interrupt the manifestations [Corry]
14347 'Finkish' dispositions get instantly blocked [Corry]
14584 Conditional analyses ignore preventions [Mumford/Anjum]
19016 Individuate dispositions by their output [Vetter]

d. Dispositions as occurrent

11938 Capacities only exist during activity [Aristotle]
15766 Megarans are just denying qualities [Aristotle]
15767 Denying potential means nothing happens! [Aristotle]

21491 Peirce became a realist about possibilities [Peirce]
15490 Dispositions are structural similarities [Quine]
16945 Soluble means like things that dissolve [Quine]
15315 How to conceive of mere possible events? [Har  /Madden]
15180 Actuality can't fix modal facts [Sidlele]
9499 There are no unmanifested dispositions [Bird]
14350 We should forget uninstantiated dispositions [Corry]
19017 Nomological dispositions are always realised [Vetter]

e. Dispositions as potential

14297 Dispositions are not particular states [Ryle]
15797 Everything is dispositional! [Fetzer]
14291 Dispositions are actual - not mere possibilities [Mumford]
14299 Unmanifested dispositions seem possible [Mumford]
14920 Modality in science explains predictions [Ladyman/Ross]

7. Against Powers

criticisms of the idea that there are 'powers' in reality

15983 Locke really replaces powers with structures [Locke]
11950 We cannot experience the powers [Hume]
11941 Powers are their exercise [Hume]
13602 The word 'power' has not meaning [Hume]
17772 Kant claims causal powers are relational [Kant]
14300 Science dropped force-exerting agencies [Ryle]
11946 Propensities in situations, not objects [Popper]
17667 Power truthmakers are categoricals [Armstrong]
17666 Physical possibilities don't actually exist [Armstrong]
17687 Universal powers gives a regress [Armstrong]
18397 Powers need non-power outputs [Armstrong]
18399 How can gravity-power know distances? [Armstrong]
8573 We can't tell what properties are causal [Lewis]
14323 It is easy to invent powers as causes [Mumford]
14328 What are traditional powers if inactive? [Mumford]
14331 There are no dispositions, just mechanisms? [Mumford]
14582 Dispositions as normativity or intentionality? [Mumford/Anjum]
19014 Are spatiotemporal relations dispositional? [Vetter]

D. Universals

1. Universals

single concepts applying to many things

11379 Substance is particular, universals shared [Aristotle]
12096 General universals give potential knowledge [Aristotle]
15034 Universals: real? physical? independent [Porphyry]
5016 There are five basic universals [Descartes]
6487 Early empiricists ignored universals [Robinson,H]
10533 Nouns and predicates have different reference [Frege]
5383 All sentences contain a universal [Russell]
4428 Propositions express properties or relations [Russell]
5406 If you limit universals bad philosophy results [Russell]
4479 Universals have no physical location [Russell]
8495 Particular v universal is a linguistic error [Ramsey]
8493 Universals bunches of particulars, or opposite [Ramsey]
1612 Philosophy of maths is the universals debate [Quine]
8506 Properties are too close for a relation [Armstrong]
17678 Universals are repeatable features [Armstrong]
4448 Decide universals by words, or by science? [Armstrong]
13572 Substantive, dynamic and property universals [Ellis]
13573 Universals are all types of natural kind [Ellis]
10532 Study predication to grasp universals [Dummett]
10488 We see word-types, not just ink-marks! [Boolos]
8569 Universals are baffling, but have a role [Lewis]
15745 Universals wholly occur separately [Lewis]
15746 How to distinguish universal-bundles? [Lewis]
15453 Universals have three main rivals [Lewis]
8502 Real universals don't explain anything [Devitt]
10472 Structural universals with same components? [Oliver]
4477 Universals come in hierarchies of generality [Loux]
4481 How do you identify independent universals? [Loux]
8288 Sortals need a substance, unlike adjectives [Lowe]
4197 Universals are properties or relations [Lowe]
10402 Universals multiply wholly present? [Swoyer]
10318 Adjectives and nouns refer to universals [Hale]
10511 Predicates AND nouns for universals? [Hale]
10521 A many-location problem for non-locatables? [Hale]
4451 What distinguishes two identical things? [Moreland]
4453 The model/copy view is a possible Realism [Moreland]
4464 Properties are one, but realised multiply [Moreland]

2. Need for Universals
things which only universals seem to explain
2142 Plurals can be united by one characteristic [Plato]
153 Humans grasp universals and unity from senses [Plato]
223 Communication is impossible without the forms [Plato]
227 Meanings have to remain constant [Plato]
1675 Forms aren't essential, but universals are [Aristotle]
649 Scientific knowledge requires universals [Aristotle]
21710 Discussing colours reveals universals [Russell]
4030 A priori knowledge requires universals [Russell]
4427 There is no truth without universals [Russell]
3751 Allow universals to make accepted theory true [Quine]
10729 Universals explain resemblance and cause [Armstrong]
4032 How are two particulars one type? [Armstrong]
17669 Regularity laws need universals for reference [Armstrong]
8539 The laws of nature need universals [Armstrong]
9485 Universals also concern how it could be [Shoemaker]
8566 Causes and laws of nature need universals [Mellor]
21961 Which universals actually exist? [Lewis]
15436 Universals are to explain resemblance [Lewis]
7034 Universals solve several basic problems [Heil]
8293 Laws of nature need real universals [Lowe]
4449 Universals exist in language, laws and thought [Moreland]
4450 The main problem is unity of natural classes [Moreland]
16260 Second-order logic settles universals problem? [Maudlin]
7951 What explains qualitative identity? [Macdonald,C]
22134 Thought is general, the world is particular [Boulter]

3. Instantiated Universals
universals only existing in actual things
11037 Colour must be in individuals [Aristotle]
12094 Universals are always in particulars [Aristotle]
17677 Instantiated universals needs Eternalism [Armstrong]
17686 Universals:abstractions from states of affairs [Armstrong]
15442 Universals are abstractions from instances [Armstrong]
15747 Universals can't be parts of things [Lewis]
10724 Locating universals creates absurdities [Oliver]
10730 Can unique universals be 'similar'? [Oliver]
7963 Properties of properties have no location [Oliver]
4454 One-In-Many universals are in particulars [Moreland]
10197 Immanent universals are in many places [Zimmerman,DW]
9486 Must a real universal depend on a particular? [Bird]

4. Uninstantiated Universals
universals existing apart from their actual instances
22125 Duns Scotus was a realist about universals [Duns Scotus]
5409 Universals 'subsist' outside time [Russell]
4446 Unexemplified universals must exist alone [Armstrong]
15729 Instantiated must define uninstantiated [Quinton]
8499 Nominalism cannot handle abstract reference [Jackson]
10727 Bare universals exist, having properties [Oliver]
7962 Uninstantiated properties are useful [Oliver]
8962 There seem to be unexemplified shapes [Hoffman/Rosenkrantz]
8307 Particulars instantiate universals [Lowe]
4452 Properties can themselves have properties [Moreland]
4468 Can being even exist in space? [Moreland]
4467 Can redness be moving and stationary? [Moreland]
4469 Facts about redness do not exist in space [Moreland]

5. Universals as Concepts
universals taken to exist just as mental features
15035 Abstraction can isolate universals [Boethius]
22132 Universals are signifying concepts [William of Ockham]
5408 Whiteness is not a thought, but its content [Russell]
18715 'Green' is commitment to its future usage [Wittgenstein]
5312 Children gradually come to group objects [Wilson,EO]
4938 Universals result from brain self-mapping [Edelman/Tononi]

6. Platonic Forms
belief in the existence of pure ideas, independent of thinkers
a. Platonic Forms
7996 I am beauty and goodness [Anon (Bhag)]
1652 Socrates didn't think universals separate [Socrates]
1607 Forms are the highest objects of desire [Plato]
360 To see equalities, we must first know the idea [Plato]
20906 There exists a triangle-in-itself [Plato]
17948 Forms undermine the aims of sophists [Plato]
3039 See things with eyes, forms with intellect [Plato]

5094 Forms do not exist in space [Plato]
12043 Platonic Forms are not universals [Plato]
2159 Craftsmen know the form before the artefact [Plato]
154 Knowledge and forms inspire love when seen [Plato]
16151 Plato gave up Forms towards the end [Plato]
210 Vile and worthless things lack abstract ideas [Plato]
211 To be consistent, all things must have forms [Plato]
219 If ideas are absolute, they must be outside us [Plato]
220 Ideas must have real characteristics [Plato]
228 Ideas must exist to be opposites [Plato]
16122 Study the allocation and relation of Forms [Plato]
10422 Anti-Forms are parts of Forms [Plato]
12042 Forms were physics, not metaphysics [Plato]
307 All creation based on the Forms is good [Plato]
318 Something adds change to the unchanging forms [Plato]
321 Forms exist if knowledge & true opinion differ [Plato]
10948 Substances with nothing prior are Forms [Aristotle]
17945 Forms attempt to explain predication [Nehamas]
4472 Redness is ontologically independent [Moreland]

b. Partaking
1 There is only one source for all beauty [Plato]
368 Things share in and are named after forms [Plato]
304 Beauty is different from but present in things [Plato]
556 What do Forms and particulars have in common? [Aristotle]
17 Same word used for thing and form [Plato]
212 The whole form must be in each thing [Plato]
213 Ideas can be unified but spread out like a day [Plato]
215 Surely either everything is ideas, or nothing? [Plato]
216 The absolute idea causes similarity in things [Plato]
218 Ideas and things are not like one another [Plato]
4447 Is good changed and separated in particulars? [Plato]
317 Nature is an eternal model and a changing copy [Plato]
16110 To explain unity, participating is baffling [Aristotle]
633 A higher principle makes things share in Forms [Aristotle]
643 Substances of things aren't separate from them [Aristotle]
647 Forms can't be both universals and particulars [Aristotle]
2475 Concepts precede ideal cases of them [Fodor]
17946 Only Tallness is tall; the rest participate [Nehamas]
10722 Instantiation is set-membership [Oliver]
7964 How do universals unify if they are different? [Macdonald,C]
6900 'Beauty is beautiful' needs concept of beauty [Westaway]

c. Self-predication
190 Justice itself must be just [Plato]
563 If the form of man is manlike, it is redundant [Aristotle]
214 Is a third form needed to judge forms& things? [Plato]
217 If ideas & things are alike, it causes a third [Plato]
9483 Forms have to be their own paradigms [Aristotle]
4442 The Forms are not self-predicating [Armstrong]

d. Forms critiques
557 Forms don't explain the causes of things [Aristotle]
565 The Forms cannot explain change [Aristotle]
12122 Forms aren't separate from matter [Bacon]
5574 Plato's Forms are beyond all sensing [Plato]
5130 Man-himself is exactly the same as man [Aristotle]
27 Forms do not need to be eternal [Aristotle]
28 The forms don't affect real living [Aristotle]
1677 Forms are nonsense, or irrelevant [Aristotle]
16145 Predicates are not things; they pick out kinds [Aristotle]
16108 If man is Animal and Biped, he lacks unity [Aristotle]
605 Forms are less real than their particulars [Aristotle]
618 The theory of Forms must explain movement [Aristotle]
641 Silly things are proved by arguments for Forms [Aristotle]
640 No one can find an argument to prove the Forms [Aristotle]
642 What use is the theory of Forms? [Aristotle]
4470 Properties are not ontologically independent [Aristotle]
645 Numbers intermingle, so cannot be Forms [Aristotle]
20817 Platonic Forms are just our thoughts [Stoic school]
11205 A form can't contain 'many' or 'one' [Aquinas]
17192 Universals are just imagined similarity [Spinoza]
11914 Platonism increases obscurity [Molnar]
3353 You must interact with Forms to know them [Benardete,JA]
7039 How do you detect universals among instances? [Heil]

E. Nominalism

1. Nominalism

denial that ideas and concepts can have any real existence

a. Nominalism

15387 Tulip and horse differ more than 2 horses do [Duns Scotus]
15386 True science implies true generalities [Duns Scotus]
16639 Only individual bodies exist [Bacon]
8494 Socrates 'is wise' and 'has wisdom' identical [Ramsey]
10151 I am a deeply convinced nominalist [Tarski]
8505 Why are different tokens of one type? [Armstrong]
18957 Nominalists must be materialists [Putnam]
10534 Nominalism now means denial of abstracta [Dummett]
9880 Nominalism needs direct contact with objects [Dummett]
11913 Predicate extensions is inexplicable [Molnar]
11962 Nominalists only accept first-order logic [Molnar]
10744 Reject abstractions, or universals, or sets [Oliver]
8961 Nominalists like Ockham, and not unobservables [Hoffman/Rosen]
4482 Nominalists accept many things as primitive [Loux]
21633 Are properties just conventional projections? [Williamson]
4459 May properties exist, but not universals [Moreland]
9435 'Porridge' nominalists deny natural joints [Mumford]
b. Nominalism about universals
5869 The 'Form of the Good' is empty words [Aristotle]
10395 Abelard was irrealist about most things [Abelard]
10396 A universal present in contradictory things? [Abelard]
9103 Universals are just thought-objects in minds [William of Ockham]
15388 Universals are singles, signifying many [William of Ockham]
17247 The only generalities are words [Hobbes]
7717 All things that exist are particulars [Locke]
6715 Universals do not have one single meaning [Berkeley]
6719 Pure particulars don't suggest abstractions [Berkeley]
15402 Being red is irreducible, not 'redness' [Quine]
9006 Accepting universals is arbitrary or pragmatic [Quine]
8576 One over Many deserves neglect [Lewis]
8503 Just accept 'a is F' as basic [Devitt]
7718 Universals are inventions, or words or ideas [Lowe]
4232 Nominalist believe only in particulars [Lowe]

c. Nominalism about abstracta

17619 We renounce all abstract entities [Goodman/Quine]
8529 Are properties just predicates or classes? [Armstrong]
8501 Predication is basic, not having properties [Devitt]
8858 Philosophers 'discover' abstracta everywhere [Yablo]
4478 Can nominalists explain abstract terms? [Loux]
10310 Four problems with Fregean abstracta [Hale]
7971 Nominalism needs particulars, words and sets [Macdonald,C]
14596 Nominalism: no number, properties, relations, sets [Dorr]
19122 Nominalists can reduce properties to truths [Halbach/Leigh]

2. Resemblance Nominalism

universals are groups of resembling particulars

5015 Universals rely on similarities [Descartes]
6714 Universality is not intrinsic but relational [Berkeley]
11098 Resemblance wrongly implies identity [Hume]
7954 One word is applied to a resemblance [Hume]
4441 'Resemblance' itself is a universal [Russell]
4141 Games have a 'family resemblance' [Wittgenstein]
7956 Two resemblances also need 'respects' [Goodman]
7957 Without respects, very diverse sets [Goodman]
8532 'Respects' seem rather like properties [Armstrong]
4439 Properties are resemblances between classes [Armstrong]
4440 Resemblance classes are hard to construct [Armstrong]
8500 Resemblance must mention the respect [Jackson]
8521 Does resemblance just depend on us [Campbell,K]
3176 Family resemblance isn't a universal [Rey]
7009 Universal reduce to similarities of modes [Heil]
7041 Similar objects share; properties don't [Heil]
7720 Things resemble in (universal) respects [Lowe]
21600 'Blue' is not a family resemblance [Williamson]
4458 Resemblance reveals natural classes [Moreland]
9447 Clusters of powers can resemble in degrees [Mumford]
9472 Resemblance itself needs explanation [Bird]
7955 How to explain resemblance, or its absence? [Macdonald,C]
18435 Resemblance explains properties [Rodríguez-Pereyra]
18436 Resemblance just needs the entities [Rodríguez-Pereyra]
18437 Resemblance needs at least two entities [Edwards]

3. Predicate Nominalism

universals are really just linguistic predicates

15384 Only words can be 'predicated of many' [Abelard]
6440 Words themselves are universals [Russell]
7952 Universals are our willingness to co-refer [Goodman]
4443 Predicates have no ontological commitment [Quine]
10789 Predicates are relational, or non-referring [Marcus (Barcan)]
4031 Predicates need not entail properties [Armstrong]
8530 Physical changes don't need predicates [Armstrong]
8536 What justifies application of a predicate? [Armstrong]
4431 Universals are just repeated predicates [Armstrong]
8565 Properties give predicates their meaning [Mellor]
4205 Not all predicates denote properties [Lowe]
8967 Some predicates can't be properties [Lowe]
4457 Predicates and properties are separable [Moreland]

4. Concept Nominalism

universals are mental concepts

19382 Abstracta are abbreviations; only things exist [Leibniz]
4429 Mere ideas can't be universals [Russell]
11099 'Is square' doesn't pick out an object [Quine]
4432 Universals are just repeated concepts [Armstrong]
4433 Maybe concepts and predicates are universals? [Armstrong]
10400 General terms are concepts, not properties [Swoyer]

5. Class Nominalism

universals are classes of things

8504 Properties are open sentences or classes [Quine]
7970 Quine is a Class Nominalist [Quine]
18442 Knowing attributes is knowing what has them [Quine]
8531 Most sets lack a common property [Armstrong]
4434 A universal is membership of a set [Armstrong]
4436 Universals are natural sets [Armstrong]
4435 Some sets have no shared properties [Armstrong]
18371 Classes are over-large truthmakers [Armstrong]
8550 Triangular/trilateral identical properties [Shoemaker]
20339 Classes don't share their members properties [Wollheim]
8570 Having a property is class membership [Lewis]
8574 Class and Resemblance Nominalism the same [Lewis]
15438 Some classes can be 'natural' [Lewis]
7032 A property is not bestowed by set membership [Heil]
4233 Nominalist definitions of sets are circular? [Lowe]
4471 Properties have no precise identity [Moreland]
14597 Class Nominalism sees classes of resemblers [Dorr]

6. Mereological Nominalism

universals are wholes, though found in parts

11094 'Red' is one object in space-time [Quine]
11097 Red is the largest red thing [Quine]
4438 Squareness can't be the unity of all squares [Armstrong]
4437 Whiteness is a unity of all the white things [Armstrong]
10173 Nominalists can appeal to mereological sums [Reck/Price]

9. Objects

A. Existence of Objects

1. Physical Objects

what distinctively unifies physical objects

16154 Give up individuals that need universals [Aristotle]
16158 Particular are form, matter and accidents [Aristotle]
12499 Bodies cohere, and move things [Locke]
5533 Objects are not known to us at all [Kant]
21449 Experience needs general concepts of objects [Kant]
6473 Objects are appearances obeying physics [Russell]
14732 Objects are groups of events [Russell]
8498 Assuming objects simplifies experience [Quine]
1628 Physical objects are a very useful myth [Quine]
8464 Objects are just events or processes [Quine]
7924 The concept of objects is crucial to science [Quine]
9018 Objects are 4-D materials in a space-time [Quine]
2351 Physical objects stay together when moved [Putnam]
10541 For some concreta ostension is impossible [Dummett]
17556 Objects: spacetime, move, surface, mass, stuff [Inwagen]
8264 Table-shaped particles, but no tables? [Inwagen]
8515 Objects are co-located tropes [Campbell,K]
8519 Bundles make Id. of Indiscernibles necessary [Campbell,K]
11116 The basic category is physical object [Jubien]

7685 Objects are defined by their predicates [Jacquette]
7008 Objects are just 'bundles' of tropes [Heil]
7018 Objects are substances, bearers of properties [Heil]
10272 An 'object' is a structural concept [Shapiro]
8267 Objects are in space-time, and causal [Lowe]
8265 Accept objects if they explain things [Lowe]
8275 Objects are entities with identity-conditions [Lowe]
16130 All objects have identity-conditions [Lowe]
16232 Natural objects have the right stage-relations [Hawley]
6124 The objects of folk ontology don't exist [Merricks]
6134 Swimming pool water is not an object [Merricks]
10782 Modern objects concern quantification [Linnebo]
14952 Things are constructs for tracking [Ladyman/Ross]
14485 Ordinary objects are almost unavoidable [Thomasson]
14487 Objects meet their existence conditions [Thomasson]

2. Abstract Objects

objects not existing in physical space-time

a. Nature of abstracta

9607 Abstract objects are Plato's supreme discovery [Brown,JR]
16086 Objects lacking matter are intrinsic unities [Aristotle]
12990 Abstracta are essences or accidents [Leibniz]
8647 4 is an object, though not in space [Frege]
10545 Non-causal abstracta can be changed [Dummett]
9885 Abstract objects are a pseudo-problem [Dummett]
10487 I am a fan of abstract objects [Boolos]
10414 Abstracta are encoded property groups [Zalta]
10558 Conceiving properties fixes abstracta [Zalta]
17785 Reals aren't now considered abstract objects [Mayberry]
10403 Abstracta exemplify abstraction [Swoyer]
10514 A temporal non-spatial mind is abstract [Hale]
10513 Chess may be non-spatial, but it is temporal [Hale]
10518 Some abstracta are 'of' something else [Hale]
10523 Abstraction rests on spatial separation [Hale]
8704 Use 'place in a structure' instead of 'object' [Friend]

b. Need for abstracta

13387 Abstract objects are very useful [Quine]
16980 Logical and ontological senses of 'object'? [Strawson,P]
18950 Physics is full of non-physical entities [Putnam]
10555 Intuition is causal interaction with abstracta [Dummett]
18067 Abstract objects were a bad explanation [Kitcher]

c. Modern abstracta

12939 Uniform things are mere abstractions [Leibniz]
10309 Frege derives numbers from singular terms [Frege]
10550 Abstracta just have to fall under a concept [Frege]
18269 Objects are extensions or function-ranges [Frege]
8719 Contradictory objects have properties [Meinong]
10543 Abstracta names need functional expressions [Dummett]
9858 Abstract objects are objective non-actual [Dummett]
9859 Denying the Equator as acausal is daft [Dummett]
9860 Truth-conditions show the Equator as object [Dummett]
10489 We constantly deal with abstract objects [Boolos]
10415 Abstracta are distinguished by properties [Zalta]
9878 Defined abstractions must refer to objects [Wright,C]
9969 The empty set is the purest abstract object [Jubien]
10626 Objects are what singular terms refer to [Hale/Wright]
7699 There are abstract particulars, and universals [Jacquette]
7783 Bodies and abstractions can be 'things' [Lowe]
10307 A Fregean 'object' is broader than normal [Hale]

d. Problems with abstracta

10320 Abstract nouns like identity-criteria [Dummett]
10547 Only language can cite abstract objects [Dummett]
9872 Abstract objects need the context principle [Dummett]
18213 Applicable abstract objects must be impure [Field,H]
18498 Wanting truthmakers produces abstracta [Heil]
10315 What kind of object is a 'whereabouts'? [Hale]
8915 How do we make reference to abstractions? [Rosen]

3. Objects in Thought

objects as conceptual entities used in reasoning

9825 A thing is fixed by all possible thought of it [Dedekind]
8785 Objects just are what singular terms refer to [Frege]
10278 For us, objects require concepts [Frege]
8489 Objects are expressions without no spaces [Frege]
10535 Frege needs objects for names and predicates [Frege]
9877 The non-actual objective is just thought [Frege]
8971 There exist non-existent objects [Meinong]

8718 Objects just need properties, not existence [Meinong]
7781 An object of thought is a unified entity [Russell]
21536 Melodies are perceived after existence [Russell]
10796 If objects are thoughts, that's psychologism [Marcus (Barcan)]
10531 Philosophy has a modern notion of 'object' [Dummett]
9202 Objects can have logical form [Fine,K]
8263 Identity-conditions suffice for an object [Lowe]

4. Impossible objects

status of 'objects' that can't actually exist

10945 Some say non-existents 'are' [Aristotle]
7756 All thought objects have some being [Meinong]
15781 Knowledge objects outnumber existents [Meinong]
21531 'Pegasus is a flying horse' seems true [Lackey]
18777 The King of France violates excluded middle [Linsky,B]
21545 Denoting theory deals with round squares [Russell]
21547 Does an 'existent round square' have to exist? [Russell]
15783 Can descriptions identify non-existents? [Lycan]
16435 Essences are surrogates for nonexistents [Plantinga]
18948 Every property set has an object [Parsons,T]
14617 Predicates can't apply to non-existents [Stalnaker]
15792 Non-existent things are property bundles? [Lycan]
18852 Any properties can form an object? [Rosen]
14392 Being a hobbit is not exemplified [Merricks]
12448 No existence - no properties [Azzouni]
18766 If 's' doesn't refer, existence is undeniable [Anderson,CA]
18768 We can deny existence using concepts [Anderson,CA]

5. Simples

minimal small components that make up larger objects

11209 The simple's whatness is its very self [Avicenna]
13170 Things are based on atomic substances [Leibniz]
14166 Unity isn't found in what actually exists [Russell]
17000 Hoping for simples is utopian [Kripke]
16070 There are no objects with proper parts [Unger]
14593 Quantum denies existence of 'things' [Swoyer]
6125 Elimination of objects does not imply simples [Merricks]

a. Individuation

13263 Grasp objects through maths and purposes [Plato]
11247 Know a thing by its cause [Aristotle]
12062 Identity is better shown by form [Aristotle]
13090 Matter distinguishes corporeal substances [Aquinas]
16632 Contradiction is what distinguishes things [Duns Scotus]
1211 Identity at an instant is uniqueness [Locke]
12508 Organisation individuates organisms [Locke]
12701 Individuation by whole entity, or by form [Leibniz]
12979 Only contact determines individuals [Leibniz]
12775 Four relations reveal unity [Leibniz]
21293 Individuation must involve a period of time [Hume]
17432 The universe is given as objects [Frege]
8277 No object without identity [Lowe]
18441 No entity without identity [Quine]
15810 Individuation is relating to ourselves [Chisholm]
14655 Identity criteria are essential facts [Plantinga]
17519 The 'object' concept is prior to its problems [Ayers]
12132 Indiscernibility establishes identity [Brody]
16492 Explain identity, change and singling out [Wiggins]
16493 Individuation relates things and thinkers [Wiggins]
11900 Keep identity, drop counterfactuals [Mackie,P]
11870 There are three principles of individuation [Wiggins]
13375 Not all entities need identity conditions [Jubien]
12017 Some facts must support an identity [Forbes,G]
13102 How do we individuate the origins of things? [Cover/O'Leary-Haw
13103 Numerical difference is symmetrical [Cover/O'Leary-Hawthorne]
8268 Electrons are countable but lack identity [Lowe]
8965 Matter and form combined individuate spheres [Lowe]
4715 Nature fixes identities, but not our theories [O'Grady]
12850 Individuation must know potentiality [Simons]
14601 Individuation aims to count entities [Schaffer,J]
11897 Fix identity now and over time [Mackie,P]
11898 Individuation may include counterfactuals [Mackie,P]
14950 Thermodynamics explains individuation? [Ladyman/Ross]
18570 Individuation could take many forms [Machery]
18765 Individuation: medievais, Leibniz, Frege... [Anderson,CA]
16649 A true entity must be 'separable' [Pasnau]

b. Individuation by properties

14524 Body: shape,size,resistance and weight [Epicurus]

12971 Indistinguishability means no individuation [Leibniz]
19379 Its law of change individuates a substance [Leibniz]
10194 Distinction is by property or relation [Black]
17668 Individuate by unique properties [Armstrong]
8520 Objects are quality-groups plus position [Quinton]
17647 Individuate by essential modal properties? [Kripke]
15455 Total intrinsic properties fix identity [Lewis]
8303 Identity-conditions cannot individuate [Lowe]
16680 It is Quantity that individuates things [Pasnau]
16785 Rejecting essence ruins individuation [Pasnau]

c. Individuation by location

14960 Bodies are what occupy space [Hobbes]
17249 Two things have separable places [Hobbes]
17250 Separating places separates the things [Hobbes]
12506 Individuating is being at time and place [Locke]
12563 Two bodies can't be in the same place [Locke]
12693 Body is what exists in space [Leibniz]
13098 Things distinguish places, not vice versa [Leibniz]
21535 To exist, objects must occupy space and time [Russell]
16496 Singling out extends over time [Wiggins]
4480 Identity by time and place is circular [Loux]
8292 Diversity is difference in space-time [Lowe]
7961 Things have unique exclusive places [Macdonald,C]

d. Individuation by haecceity

13787 Each thing has essence as well as properties [Plato]
16160 No haecceities for Aristotle [Aristotle]
14665 Only Plato can possess 'Platinity' [Boethius]
22127 Essences need to be particularised [Duns Scotus]
13094 A haecceity does nothing but individuate [Duns Scotus]
13105 Laws-of-the-series are haecceities [Leibniz]
13075 Individuals must be distinguished internally [Leibniz]
15805 There are haecceities, and individual concepts [Chisholm]
15807 Haecceities are confined to one thing [Chisholm]
14647 Surely self-identity is essential to Socrates? [Plantinga]
14658 Identical-with-Socrates is a property of his [Plantinga]
13132 A haecceity is being-identical-with-that-thing [Plantinga]
14508 A 'thisness' is identity with itself [Adams,RM]
14511 Mere qualities can't ensure identity [Adams,RM]
16463 Only actual things have haecceities [Adams,RM]
11866 'Thisness' is no longer useful [Wiggins]
11117 Haecceities implausibly have no qualities [Jubien]
13393 Things have a property of being that thing [Jubien]
13104 Haecceity: property, thisness or singleton [Cover/O'Leary-Hawthorne]
10995 A haecceity is unique essential properties [Read]
11883 A haecceity is simple and essential [Mackie,P]

e. Individuation by kind

12351 Genus and species reveal primary substance [Aristotle]
12280 Genus gives the essence best [Aristotle]
16156 Individuals differ with their species [Aristotle]
12529 'Sortal' comes from the word 'sort' [Locke]
17510 Thinking must use general categories [Ayers]
17511 We spot continuity before any sortals [Ayers]
17522 Sortals classify objects' natures [Ayers]
17515 Caterpillar/moth is continuous, notortal [Ayers]
15834 Sortalism needs permanent properties [Brody]
13128 Sortals cannot explain categories [Westerhoff]
16495 All singling out is singling out 'as' [Wiggins]
16501 A thing is theortal it falls under [Wiggins]
16506 Every determinate thing falls under aortal [Wiggins]
12055 Sortal predication answers 'what is it?' [Wiggins]
12059 Rivers change, but remain rivers [Wiggins]
12063 Weortal cross-reference individuals [Wiggins]
12051 Good kind-division reveals substances [Wiggins]
12052 Identities areortal, not bare [Wiggins]
12054 Activity and relation guideortal [Wiggins]
12053 Sortal can't come in degrees [Wiggins]
11896 Individuation defines essence [Wiggins]
15835 Sortalism needs individuation principles [Wiggins]
10679 A whole must fall under a kind [Wiggins]
14363 Identities need concepts to fix them [Wiggins]
14364 The kind entails an essential constitution [Wiggins]
11841 The same planet, but not the same star! [Wiggins]
11851 Many class predicates are notortal [Wiggins]
11865 Possibilities need essential concepts [Wiggins]
13868 Sortals can't be necessary (phaseortal!) [Wright,C]
16235 Persistence needs a 'dominantortal' [Burke,M]

14753 'Dominant'ortal entail more properties [Burke,M]
13388 The kind doesn't give a thing existence [Jubien]
8291 Individuate the kind; identify particulars [Lowe]
14745 Sortalism must first say what kinds there are [Sider]
12860 Sortal nouns give existence conditions [Simons]
7926 Individuate kinds, identify particulars [Macdonald,C]
14082 Noortal can precisely pin down an object [Schaffer,J]
14193 Essences is without structure, justortal [Paul,LA]
14195 What determines a thing's sort? [Paul,LA]
14196 Objects are multiple if manyortal involved [Paul,LA]

6. Nihilism about Objects

denial that there are such things as unified objects

13782 Everything gives way, and nothing stands fast [Heraclitus]
13209 There is only mixing and separating [Empedocles]
15855 If all is separate, no account is possible [Plato]
1687 Why are predicates united in a single thing? [Aristotle]
12953 Fluidity is basic, and we decide the entities [Leibniz]
7189 Maybe 'objects' are just relations of subjects [Nietzsche]
7207 The unities counting needs may not exist [Nietzsche]
18314 'Thing' derives from reifying the ego [Nietzsche]
18987 'Things' are carved from reality by us [James]
13935 Things only exist in a testable language [Carnap]
8969 Identity is only within a category [Geach]
15272 Humeans lose things along with substance! [Harré/Madden]
17565 Nihilism: composition is impossible [Inwagen]
14228 Nihilist denial of tables is a contradiction [Liggins]
14468 Bodies are cooperatives, not entities [Inwagen]
13384 Objects are decided by three conventions [Jubien]
13385 'Objects' are entirely created by us [Jubien]
4206 If object identity is conventional, is ours? [Lowe]
14229 No composites, but different semantics [Merricks]
6142 Folk ontology is no better than the arbitrary [Merricks]
14472 Baseballwise atoms entail a baseball [Merricks]
14469 Atoms do the causing, not the objects [Merricks]
21652 Perception isn't about simples [Hofweber]
14927 Physics seems to deny individuals [Ladyman/Ross]
14944 Different individuals at different scales? [Ladyman/Ross]
14946 Things only exist at some scale [Ladyman/Ross]
21651 Chair-wise simples must be a chair [Thomasson]
14467 Ordinary objects are contradictory or confused [Thomasson]
14479 Which first - people, or conventions? [Thomasson]
14486 You can't eliminate the semantics of 'chair' [Thomasson]

B. Unity of Objects

1. Unifying an Object

what unifies something enough to qualify as an object

a. Intrinsic unification

472 Number is the cause of recognition [Philolaus]
13261 Objects have mathematical structure [Plato]
13265 Plato has less interest in the source of unity [Plato]
17041 Natural objects include lives and elements [Aristotle]
590 Things can be a unity in four different ways [Aristotle]
10949 Primary things just are their essence [Aristotle]
603 Why is man a unity, not just a biped animal? [Aristotle]
17838 Does an indivisible process bestow unity? [Aristotle]
17840 Is a unity just numerically indivisible? [Aristotle]
17841 Maybe formal cause unifies substance [Aristotle]
16163 Form makes an entity what it is [Aristotle]
18459 Diversity arises from the power of unity [Porphyry]
16650 Unity is puzzling as it may be hidden [Duns Scotus]
16751 There are five degrees of unity [Conimbricense]
12745 Unity by substance gives us precision [Leibniz]
16513 Substance identity is a law of its persistence [Leibniz]
14164 The only unities are wholes made of parts [Russell]
17517 Could the matter have two principles of unity? [Ayers]
15075 Entities fix modal features, not vice versa [Fine,K]
12886 Wholes need a relation between parts [Simons]
14495 Let's put structure and form back into objects [Koslicki]
13264 Wholes are more than just structure [Koslicki]

b. Unifying aggregates

3357 Entities can never combine to make new ones [Benardete,JA]
15851 Wholes are created, and have a form [Plato]
13272 To be indivisible is to be one [Aristotle]
17842 Unity is indivisible movement or thought [Aristotle]
17860 Contact, mixture and position can unify [Aristotle]
14046 A body is an aggregate with properties [Epicurus]

17555 'One' is undivided, or it is number [Aquinas]
16770 Aggregate and true unity are quite different [Duns Scotus]
17248 If whole bodies move their parts must move [Hobbes]
17188 A single effect means a unified cause [Spinoza]
17028 Particles attract, and cohere when close [Newton]
12699 A form or soul must unite a body [Leibniz]
12921 Accidental unity comes in degrees [Leibniz]
14112 Sets lack the unity to be 'wholes' [Russell]
17571 All physical things are organisms or simples [Inwagen]
16072 The rock: object, or collection, or stuff? [Burke,M]
10726 Universal-fusions make two things one [Oliver]
10725 Concreta aren't bundles of abstracta [Oliver]

c. Unity as conceptual

15856 One or many may depend on our talk [Plato]
17839 Some things are unified by their account [Aristotle]
2297 Things are distinct if I can distinguish them [Descartes]
12746 Unity of reason or perception, or real [Leibniz]
12035 Entities are conjunctions of qualities [Leibniz]
13160 Understanding requires unities [Leibniz]
20362 Unity starts with seeing a unified ego [Nietzsche]
14252 Identity depends on propositions, not vice v [Fine,K]
13332 Set membership models objects the best [Fine,K]
14928 Things are abstractions from structures [Ladyman/Ross]
14481 A modal profile exists with each object [Thomasson]

2. Substance

traditional concept of a single united entity

a. Substance

16172 Substance has substrate but no predication [Aristotle]
16623 We only know substances by analogy [Aristotle]
16091 Substance as substrate, or some part? [Aristotle]
11280 Primary being: that which lies under [Aristotle]
1694 Substance has no contraries or gradations [Aristotle]
11040 Properties can receive contraries [Aristotle]
569 Philosophy aims to understand substance [Aristotle]
592 Existence and substance are the same problem [Aristotle]
615 Early philosophers studied substance [Aristotle]
11231 'Ousia' is 'being', not 'substance' [Aristotle]
12076 Substance is prior in three ways [Aristotle]
11284 'Ousia' is NOT 'substance' [Aristotle]
6037 Stoics make substance more basic than matter [Stoic school]
16776 Parts of substance are not substance [Duns Scotus]
16626 We grasp substance very generally [Duns Scotus]
16667 Substances are incomplete without modes [Suárez]
3626 Attributes suffice to reveal a substance [Descartes]
16630 From attributes we infer substances [Descartes]
8546 Powers are part of substances [Locke]
19349 A complete substance implies its predicates [Leibniz]
12916 Body without substance is just aggregate [Leibniz]
12919 Entity needs substance, to hold its future [Leibniz]
12923 Bodily substance needs a soul [Leibniz]
12716 Powers clarify what substance is [Leibniz]
13197 Substance is a key to true philosophy [Leibniz]
12943 Substance binds past to future [Leibniz]
12776 Every substance is alive [Leibniz]
5550 Substances are subjects, never mere predicates [Kant]
21981 Substance without dialectic is formless [Hegel]
17553 Mass/energy still counts as 'substance' [Heisenberg]
4068 Substance is separate from properties [Crane]
18507 Substances are simple, to bear properties [Heil]
13100 Maybe 'substance' is a mass noun [Cover/O'Leary-Hawthorne]
18617 Substances can survive a change of parts [Mumford]
7936 Substances are unities, unlike properties [Macdonald,C]
16617 Only substances exist? [Pasnau]
16628 Corpuscularianism might explain substance [Pasnau]
16741 Scholastics treat Aristotle as physics [Pasnau]
16777 Crowds have properties, so are substances? [Pasnau]

b. Need for substance

599 Unknown substances could exist [Aristotle]
16629 Infer substances from their qualities [Grosseteste]
5639 Substance is an essential notion for thought [Spinoza]
12704 Aggregates must reduce to substances [Leibniz]
10710 Substance avoids infinite meaning [Wittgenstein]
13042 Well-founded relations imply substance [Potter]

c. Types of substance

593 Forms, maths and objects are substances [Plato]

594 Substances are numerous, including soul [Speusippus]
16140 Secondary substance can't be basic in ontology [Aristotle]
10965 Are substances particulars, or kinds? [Aristotle]
11036 A subject has a 'primary' substance [Aristotle]
1681 A point is a substance with a position [Aristotle]
16778 Organisms are the obvious substances [Aristotle]
600 Everyone agrees on about ten substances [Aristotle]
16084 Primary substance: existence or understanding? [Aristotle]
16779 Dividing a substance makes two subjects [William of Ockham]
16616 Substances 'stand' or 'subsist' [Eustachius]
1196 Substance is God, mind or body [Locke]
12536 Sort substances by nominal essence [Locke]
7558 Substances mirror God or the universe [Leibniz]
13161 Matter contains infinite substances [Leibniz]
13171 Substance must involve change [Leibniz]
4304 Substances are one, two or infinity [Cottingham]
7019 One substance - space-time or quantum field? [Heil]
13068 Substance: nature? type? individual? [Cover/O'Leary-Hawthorne]
16615 Scholastics have thin and thick substance [Pasnau]

d. Substance defined

598 Substances cannot mix, and are atoms [Democritus]
8287 Is substance concrete or abstract? [Aristotle]
12350 Substances are subjects of other things [Aristotle]
11299 Substance is both subject and cause [Aristotle]
12060 Ousia is subject, essence, and thinsness [Aristotle]
10941 Substance: being,universal,genus,subject? [Aristotle]
595 On one account, substance is matter [Aristotle]
11290 Matter is too vague for substance [Aristotle]
10959 Substance is form [Aristotle]
12093 Diverse universals are not substances [Aristotle]
12362 Substance is primary cause of being [Aristotle]
607 Universals are not substances [Aristotle]
11233 Substance is "that which lies under" [Aristotle]
12079 Unity distinguishes substance [Aristotle]
5013 Substances have independent existence [Descartes]
4813 Independent conceptions are substances [Spinoza]
21857 Substance is the power of self-actualisation [Spinoza]
7945 Substance is qualities plus substratum [Locke]
12712 Substance is that which can act [Leibniz]
7561 Substances are essentially active [Leibniz]
13091 Add concept, law, force, form, soul [Leibniz]
12756 Substance is an action and reaction force [Leibniz]
11855 Activity is the essence of substance [Leibniz]
6729 Substance is just existence with properties [Berkeley]
3959 Spirit is the only substance [Berkeley]
21451 Substance persists through change [Kant]
5564 Substance must exist to make change possible [Kant]
12047 Substances are basic to reference [Wiggins]
13069 Substances are necessarily substances [Cover/O'Leary-Hawthorn]
7712 Substance has unity, independence, qualities [Lowe]
16128 Substances have independent existence [Lowe]
12358 Substance is principle and cause [Wedin]
7930 Bundles mean indiscernibles identical [Macdonald,C]
19347 Substance is independent, unified, stable [Perkins]
15391 A substance is a basic being [Robb]
18865 Substance must individuate and bear properties [Tallant]

e. Substance critique

3628 Substance is an empty notion [Gassendi]
16774 Substance and aggregate are not distinct [Descartes]
12485 Substance is obscure in its being and action [Locke]
7931 True substances seem like non-entities [Leibniz]
16636 There is no substance, just accidents [Berkeley]
12048 Substance is a collection of qualities [Hume]
13424 Substance and accidents are baffling [Hume]
11833 Substance without predicates is unknown [Kant]
18981 'Substance' is just grouping in experiences [James]
6465 There is no reason to postulate substance [Russell]
6471 Physicists' belief in substance is dubious [Russell]
14733 Substances aren't perceptible, so irrelevant [Russell]
15304 Basic fields can replaces substance [Harré/Madden]
7046 Talk of 'objects' rather than 'substances' [Heil]
12252 Substance is unknowable, or a bundle [Oderberg]
7932 Phenomenalism implies the bundle view [Macdonald,C]
7937 Is property ascription tautological? [Macdonald,C]
7939 A bundle-substance keeps changing [Macdonald,C]
7940 Is a substance a sequence of bundles? [Macdonald,C]

16775 A substance is just integral parts [Pasnau]

3. Unity Problems

difficult cases for the idea that objects have unity

a. Scattered objects

14961 A pipe survives being taken apart [Cartwright,R]
14962 Minor part-loss is not scattering [Cartwright,R]
14590 We accepted archipelagos as one object [Hawthorne]

b. Cat and its tail

16058 Whole-limbed Dion, footless Theon... [Chrysippus]
15537 Many cats as one, or one as many? [Lewis]
14751 Tib ceases, because it wasn't a 'cat' [Burke,M]
13437 CAR and PART are same, but different [Gallois]
16200 No cat part can be a cat? [Hawley]
14740 Two different things can become one [Sider]
12835 Does Tibbles survive the loss of its tail? [Simons]
12857 Tibbles can lose a tail; Tib+tail can't [Simons]

c. Statue and clay

16174 Bronze is shapeless; substance has shape [Aristotle]
10951 Statues are 'stone', not 'stone' [Aristotle]
16085 Primary matter and form are a unity [Aristotle]
16096 Statue-bronze dependence is one-way [Aristotle]
17643 The essence is relative to the description [Putnam]
17513 Is 'marble man-shaped object' ambiguous? [Ayers]
14064 Clay and statue identity is contingent [Gibbard]
14066 A piece of clay clings together in separation [Gibbard]
14067 Clay and statue can be named and discussed [Gibbard]
14069 Are you discussing 'statue' or 'clay'? [Gibbard]
17562 Statue and lump share parts, but aren't parts? [Inwagen]
17574 Kneading clay makes infinite objects [Inwagen]
16071 Sculpting destroys a lump to make a statue [Burke,M]
16234 If two objects coincide, one is destroyed [Burke,M]
13278 The lump changes when it becomes a statue? [Burke,M]
13383 We can love the statue and hate the clay [Jubien]
13400 Object, clay and statue come apart [Jubien]
7047 A statue and lump of bronze are distinct [Heil]
7048 Reduce, eliminate or allow statues? [Heil]
14381 The statue and the lump differ modally [Yablo]
16078 Clay is Statue - four reasons [Rudder Baker]
16077 The clay borrows its statue-property [Rudder Baker]
4204 Statues need shape, bronze needs stuff [Lowe]
16545 Essence show two objects are coinciding [Lowe]
16546 Essentially, a statue might have other bronze [Lowe]
16237 When does it cease to be that statue? [Hawley]
16238 Perdurantism can use counterparts for modality [Hawley]
14752 Statues are essentially statues, not lumps [Sider]
6137 Statues and clay persist differently [Merricks]
13798 Should we give up the statue? [Elder]
7948 A statue and its matter are different [Macdonald,C]
14497 Clay is just a part; the rest is the form [Koslicki]
13280 Three differences between statue and clay [Koslicki]
18060 The statue problem has a category mistake [Magidor]
14482 Two masses, for statue and for lump? [Thomasson]
14483 Grounding for statue/lump modal differences? [Thomasson]
14542 Is crushing by statue and clay overdetermined? [Mumford/Anjum]
16769 The statue is an accident, not a substance [Pasnau]

d. Coincident objects

16796 Locke may accept coincident things [Locke]
12970 We can imagine interpenetrating bodies [Leibniz]
14744 Only different kinds can coincide [Wiggins]
14750 Only one coincider fixes persistence [Burke,M]
13401 Coincident objects offend commonsense [Jubien]
12024 Could two clocks become one clock? [Forbes,G]
16080 Could identical things come apart? [Rudder Baker]
13918 Holes,shadows and light do coincide [Lowe]
14743 A stage view handles coincidents best [Sider]
12820 Two objects in the same place? [Simons]

e. Vague objects

11853 Mixtures separate if not stirred [Heraclitus]
12986 The essence of baldness is vague [Leibniz]
14797 Vagueness in maths is neglected [Peirce]
14798 Vagueness is outside non-contradiction [Peirce]
9891 Logic demands first a sharp boundary [Frege]
9388 Concepts must be sharp, not indeterminate [Frege]
14484 There cannot be indeterminate identity [Evans]
11852 Is the Pope's crown one crown? [Wiggins]

11875 Mountain boundaries are not essential [Wiggins]
15536 One cloud, of many aggregates? [Lewis]
8982 Vague concepts have no boundaries [Sainsbury]
8984 Dislike of boundaries indicates vagueness [Sainsbury]
8985 Boundaryless terms come in pairs [Sainsbury]
9769 Vague predicates, names or quantifiers? [Fine,K]
9045 Vagueness of property, object, and change [Keefe/Smith]
9047 Vagueness can be multi-dimensional [Keefe/Smith]
9053 A precise borderline area is not vague [Keefe/Smith]
10275 A blurry border is still a border [Shapiro]
21630 An about can be fuzzy in many ways [Williamson]
6861 What logic and truth are needed for vagueness? [Williamson]
9602 Vagueness debates abandon the obvious [Williamson]
16220 Vagueness is epistemic, semantic, or ontic [Hawley]
16222 Object- and property-vagueness the same [Hawley]
9132 'Or' might drift from exclusive to inclusive [Sorensen]
8944 Vagueness with components, or not [Fisher]
9389 Concept-sets can have vague members [Rumfitt]
18839 'Red-or-orange' sweeps up vague cases [Rumfitt]
18838 Fix extension by comparing contraries [Rumfitt]

C. Structure of Objects

1. Structure of an Object

general ideas about how objects must be structured

15465 Structures are dispositional [Martin,CB]
15476 Structures rest on dispositions [Martin,CB]
12685 Categorical properties are structural [Ellis]
15800 All structural properties are dispositional [Fetzer]
15452 Fa's truthmaker needs a structure [Lewis]
15448 Can structurals be atoms - with parts? [Lewis]
15449 Relations mean structurals aren't atomic [Lewis]
15439 Pictorial structurals have universals as parts [Lewis]
15441 A methane universal needs four hydrogens [Lewis]
15445 Butane and Isobutane are isomorphic [Lewis]
15434 Structurals relate necessarily to parts [Lewis]
15437 Without simples we need structurals [Lewis]
11917 Structural properties are derivative [Molnar]
11955 There are no 'structural properties' [Molnar]
14535 Structures are clusters of causal powers [Mumford/Anjum]

2. Hylomorphism

objects are structured by a form imposed on some matter

a. Hylomorphism

17043 Actual form, not potential matter, is a nature [Aristotle]
13276 Form can be an ultimate mereological atom [Aristotle]
12345 'Form' is explanatory, not ontological [Aristotle]
11285 The essence is the form [Aristotle]
16147 Forms become primary, rather than objects [Aristotle]
12071 Essences are not groups of properties [Aristotle]
11251 Do changing things have an essence? [Aristotle]
12084 Essential form is not a property [Aristotle]
16119 Form for order, matter for disorder [Aristotle]
16148 Aristotle moved from realism to nominalism [Aristotle]
16112 Matter is a property of the form [Aristotle]
12002 The essences are not necessities [Aristotle]
16164 A form must include possibilities [Aristotle]
16756 Only forms explain the stability of metals [Albertus Magnus]
16757 It is water's nature to cool down [William of Ockham]
17007 Forms rule things, as source of action [Suárez]
16585 Prime matter is the potential for forms [Eustachius]
16620 A chair's matter is wood, the shape its form [Hobbes]
16034 A form is just the 'stamp' of some matter [Boyle]
15953 Forms tell you what, but not how [Boyle]
11181 Aristotelian essentialism is causal [Marcus (Barcan)]
11184 Aristotelian and Individuating essentialism [Marcus (Barcan)]
15959 Does brass's substantial form allow melting? [Alexander,P]
12140 Necessary or defining essence? [Brody]
12346 Why form has a kind ends explanation [Wedin]
10938 All properties essential, or almost none? [Rami]
16602 Matter can exist independently of form [Pasnau]

b. Form as principle

16095 Some forms exist without matter [Aristotle]
15853 True substance is constituted by a principle [Aristotle]
16640 Form is constitutive, not operative [Hill,N]
16761 Forms for metaphysics, not for physics [Leibniz]
17544 Mathematical form is what counts [Heisenberg]
15956 Forms became treated as non-material [Alexander,P]

15128 Structure/form differs from nodes/matter [Hawthorne]
16612 Hylomorphism may not rival science [Pasnau]

c. Form as causal

16970 Form may include purpose and initiation [Aristotle]
16625 Form active, matter passive? [Bacon]
16033 The Forms are the laws controlling powers [Bacon]
12715 Add physical force to hylomorphism [Leibniz]
14496 Form is central to modern rigorous enquiry [Koslicki]
16613 Treating hylomorphism as science is wrong [Pasnau]
16747 Scholastics changed Aristotle's forms [Pasnau]
16759 Scholastics make forms efficient causes [Pasnau]

d. Form as unifier

16104 The form is just unity of the definition [Aristotle]
13277 Form is a recipe for kinds of whole [Aristotle]
16109 No matter/form clash, so unity! [Aristotle]
16088 It is the activity of form which bestows unity [Aristotle]
16765 Living things have one soul, not many [Aquinas]
16766 Unity is only possible by a single form [Aquinas]
16614 There is real unity and accidental unity [Duns Scotus]
16780 Forms of leaf and fruit unite in trees [Suárez]
16758 Living things clearly need substantial forms [Suárez]
12700 Form fixes shifting matter [Leibniz]
16748 Has a substance one form, or many forms? [Pasnau]

3. Matter of an Object

underlying material which is formed into an object

11255 When does matter endure in change? [Aristotle]
12134 Matter is what supports change [Aristotle]
12301 All distinct things have matter [Aristotle]
16092 Only potential objects count as 'matter' [Aristotle]
12300 Non-physical objects also have matter [Aristotle]
12077 Aristotle's matter is active [Aristotle]
12103 Matter is subservient to actual form [Aristotle]
11204 Ultimate matter is unified formlessness [Avicenna]
15309 Solidity implies dubious 'substance' [Harré/Madden]
12057 Matter underlies, composes and creates [Wiggins]
17531 Matter is particulate, made up of 'simples' [Inwagen]
16083 Matter threatens an object's unity [Gill,ML]
13333 Matter is unstructured objects [Fine,K]

4. Quantity of an Object

what gives an object its size and shape

16672 Quantity is the extent the parts [Olivi]
16673 Quantity gives parts union and location [Olivi]
16599 Quantity is a unneeded category [William of Ockham]
16681 Quantity is just local motion [William of Ockham]
16678 Magnitude gives parts their location [Buridan]
16743 Knowing the bulk reveals the 'quantity' [Suárez]
16597 Quantity is the capacity to be divided [Digby]
16674 Quantity is just spread-out matter [Charleton]
16671 Quantity provides parts, or spreads them [Pasnau]

5. Composition of an Object

objects seen as made up of their parts

15846 Composition equates whole with parts [Plato]
374 Is a subdivided object still a unity? [Plato]
597 Is a house more than its bricks? [Aristotle]
12507 Change of atoms is identity-change [Locke]
14749 Identity is atemporal, unlike composition [Wiggins]
15446 Composition is not just new from old [Lewis]
14748 The many are many, unlike the one! [Lewis]
6129 Objects are nothing more than their parts [Lewis]
17560 Are colliding balls a single object? [Inwagen]
17561 Compositions make one, or make many? [Inwagen]
3304 Why label bunched a thing & not scattered? [Benardete,JA]
8279 Identity by origin is circular [Lowe]
19302 Slight changes of composition imply sorites [Hale]
14747 x is identical to the ys that compose it? [Sider]
6127 Can any two objects make a third? [Merricks]
6131 Identity isn't composition; it isn't one-many [Merricks]
6132 Things keep identity but change parts [Merricks]
6141 Statueship atoms and statues look the same [Merricks]
12866 Composition is asymmetric and transitive [Simons]
10661 Real multitudes loosely compose things [Varzi]
10664 Complexes: masses, composites, or sets [Hossack]
10678 Part-wholes need composition [Hossack]
14892 Being 'made of' something is out-of-date [Ladyman/Ross]

6. Constitution of an Object

objects should be understood as what they are made of

16066 Change of parts destroys identity [Epicharmus]
6019 We could mould substances into new things [Mnesarchus]
16995 Constitution is essential to objects [Kripke]
17047 Different constitution means different thing [Kripke]
11868 Same table with different wood? [Wiggins]
14264 One notion of constitution, physical and non-? [Fine,K]
14267 Where does constitution begin and end? [Fine,K]
16076 Constitution is not identity [Rudder Baker]
16081 The constitution view unifies things [Rudder Baker]
16082 Statues have essential relational properties [Rudder Baker]
16228 Constitution: two enduring objects together [Hawley]
16229 Constitution theory needs sortal properties [Hawley]
14492 Why are constituted things one thing? [Hawley]
15848 Mereology makes constitution identity [Harte,V]
6130 A thing is its parts, or its whole substance [Merricks]
6138 Two objects can't have one location [Merricks]
12867 Hands constitute, but don't compose, fists [Simons]
13279 Six versions of constitution being identity [Koslicki]
16065 Is constitution identity, or not? [Wasserman]
16067 Constitution is asymmetric and dependent [Wasserman]
16069 Three objections to the Constitution View [Wasserman]

7. Substratum

an object's underlying aspect, apart from surface features

10962 Does Aristotle like propertyless subjects? [Aristotle]
10942 Remove all features, and what is left? [Aristotle]
16575 Something must pre-exist any new production [Aristotle]
16142 A substrate is either a this, or matter [Aristotle]
16103 A true subject must be separate, with identity [Aristotle]
16631 Remove accidents and extension remains [Descartes]
12559 Qualities attach to a 'substratum' [Locke]
12968 A 'substratum' is just a metaphor [Leibniz]
15814 A peach is F, but it doesn't 'have' F [Chisholm]
15481 Substrata are possible e.g. space-time [Martin,CB]
15264 Powers avoid the substratum problem [Harré/Madden]
11969 Logic encourages bare particular metaphysics [Kaplan]
12764 Bare particulars need real properties [Stalnaker]
16407 Possible worlds can avoid bare particulars [Stalnaker]
7929 Bundle, substratum, or essence? [Macdonald,C]
7941 Each substance contains a bare particular [Macdonald,C]
7942 Substratums explain unity and continuity [Macdonald,C]
7943 Substrata have properties, & indiscernible [Macdonald,C]
16579 Substrates may be varied, or temporary [Pasnau]
16580 A substrate may endure through all changes [Pasnau]
16584 For change, quite a fat substrate is needed [Pasnau]
16596 A bare substratum can't have a function [Pasnau]

8. Parts of Objects

relationships among parts and wholes of entities

a. Parts of objects

2084 If wholes have identity, they are indefinable [Plato]
15849 Parts have to belong to what is one [Plato]
15850 Parts are of unities, not of pluralities [Plato]
13274 The contents of an explanation are parts [Aristotle]
12697 Indivisibles are not parts [Leibniz]
9806 Parts are made of parts of parts [Mill]
8249 Membership is intransitive, unlike parts [Lesniewski]
10650 In armies, parthood is not transitive [Rescher]
17566 Parthood is causal, not just spatial [Inwagen]
14230 Nihilists can accept parts as plurals [Inwagen]
13380 Parts matter for objects, not for kinds [Jubien]
13326 'Temporary' parts might cease to be parts [Fine,K]
13327 'Timeless' parts are always parts of something [Fine,K]
18515 Spatial parts are not substantial parts [Heil]
18516 'Gunky' universes don't have parts [Heil]
18998 Parthood is a very unrestricted relation [Yablo]
6128 Parts of wholes fill a region without overlap [Merricks]
12864 We express parthood in four ways [Simons]
10647 'Part' has a huge variety of references [Varzi]
10649 'Part': reflexive, antisymmetric, transitive [Varzi]
10651 Maybe identity is an extreme of parthood [Varzi]
10654 We can define seven parthood predicates [Varzi]
12795 Parts must be the same type as wholes [Laycock]
14498 3D-ists include times in parthood relations [Koslicki]
13283 Parts and wholes could be same type [Koslicki]

14233 Treat parts as xs among the ys [Liggins]
16068 Weight of all parts is not weight of the whole [Wasserman]

b. Sums of parts

15852 A 'whole' requires an internal order [Aristotle]
15840 Does unity require a further element? [Aristotle]
16790 Bodies remain, even with dispersed parts [Hobbes]
17014 A place is a sum of place parts [Newton]
12852 If it is a part, it must be a part [Chisholm]
14210 Gerrymandered sums still have joints [Lewis]
15512 No two things consist of the same atoms [Lewis]
15519 Fusions are weird but exist [Lewis]
15521 Fusions don't add anything to reality [Lewis]
15522 Fusions support new truths [Lewis]
13329 'Aggregative' sums are spread out in time [Fine,K]
13330 'Compound' sums exist at a single time [Fine,K]
15837 What exactly is a 'sum'? [Harte,V]
15839 Does holism add an extra part? [Harte,V]
15838 The trouble is, 'sum' is singular [Harte,V]
12814 No extra-theory evidence for 'sums' [Simons]
12817 Objects with the same parts are identical [Simons]
12833 No possible world with 2 individuals [Simons]
12849 Sum plurals and masses, not individuals [Simons]
12877 We can sum things in different categories [Simons]
13041 Collections are fixed, fusions carvable [Potter]
14198 Things composed of incompatibilities? [Paul,LA]

c. Wholes from parts

13260 Wholes: container, atom, or non-existent? [Plato]
15843 If wholes are all the parts, those are wholes! [Plato]
15844 A whole is what lacks nothing [Plato]
13259 The One is one, but has parts! [Plato]
9071 We perceive wholes first, then parts [Aristotle]
16791 A whole is just its parts [Aristotle]
13269 House-parts can exist without the whole [Aristotle]
12878 Six tests for something being a whole [Aristotle]
16136 Syllables are more than the component letters [Aristotle]
20826 United even when separate? [Alexander]
20825 Still united after being divided? [Alexander]
20872 Wholes are parts, and more than parts [Stoic school]
10919 Why aren't stone-parts the stone? [Duns Scotus]
17244 Parts can make a whole in the mind [Hobbes]
12887 Wholes have quality, relations and structure [Rescher/Oppenheim]
15474 Wholes are causally the same as parts [Martin,CB]
11844 Destroying things isn't destroying parts [Wiggins]
9667 Mereological composition is unrestricted [Lewis]
13268 Restricted composition would be vague [Lewis]
15440 Wholes are not additions to ontology [Lewis]
15444 Same parts can differ at different times [Lewis]
14244 Fusions flatten all distinctions [Oliver/Smiley]
10566 Give us singletons, not sums [Lewis]
10660 Cat-fusions involve no more commitment [Lewis]
10810 Any things can fuse mereologically [Lewis]
17557 When is a thing part of something? [Inwagen]
13328 There are 'rigid' wholes or 'variable' wholes [Fine,K]
18514 Some wholes survive replacement of their parts [Heil]
18517 Which way is part-whole dependence? [Heil]
6154 Wholes are not the sum of their parts [Rowlands]
12888 Wholeness is conventional or natural [Simons]
10658 Arrangement prevents parts fixing whole [Varzi]
13742 Heaps exist, so arbitrary composites must [Schaffer,J]
13752 'Grounding' explains unified wholes [Schaffer,J]
6956 When does an object become 'whole'? [Westaway]
10665 Leibniz's Law argues against atomism [Hossack]
10682 Decomposition may exceed fusion [Hossack]
14949 A whole supports new generalisations [Ladyman/Ross]
15392 Wholes rule, if they survive part-loss [Robb]
13266 Mereology treats wholes like sets [Koslicki]
14500 Wholes differ in properties from parts [Koslicki]
13281 A whole is an entity, not just some parts [Koslicki]
18434 A whole is prior to its parts? [Edwards]

D. Essence of Objects

1. Essences of Objects

idea that objects have essences, as well as other features

11199 Essence explains behaviour or definition? [Aristotle]
12304 Essence is unchanging, and founds knowledge [Aristotle]
11294 Physical objects have essence too [Aristotle]

11298 Are essences universals? [Aristotle]
11202 It is by having essence that things exist [Aquinas]
4828 Existence or conception requires essence [Spinoza]
12498 Substances have hidden essences [Locke]
12520 Essence seems to be relations of parts [Locke]
13771 Real essence is inner constitution [Locke]
13432 Circle essence is equal radii [Leibniz]
13088 Knowing subjects reveals the predicates [Leibniz]
13077 Predicates, hence concept, hence prediction [Leibniz]
12908 Essences exist in the divine understanding [Leibniz]
12743 Substantial form unites any true being [Leibniz]
15576 Essence is a sort of unfolding [Heidegger]
5443 Kripke has made essentialism respectable [Ellis]
14666 Essences can exist unexemplified [Plantinga]
11976 Aristotelian essence is self-sufficient [Lewis]
14221 Essences: everywhere, and sources not objects [Shalkowski]
11177 Can the essence of an object be circular? [Fine,K]
12241 Essence is definable, classifiable etc [Oderberg]
15685 Essentialism: natural, cultural or linguistic? [Gelman]
15684 Children's concepts include the hidden [Gelman]
15700 Caste is more essentialised by upper-castes [Gelman]
11889 No duplicate or multiple essences [Mackie,P]
15110 Separate essence from its implications [Koslicki]

2. Types of Essence

distinctions about how essence should be understood

11237 Only universals have essence [Plato]
12098 Aristotelian essences are causal [Aristotle]
15036 Essences are universal and singular [Avicenna]
11203 Material individual and formal generic essence [Aquinas]
22126 Essences have independent and prior existence [Duns Scotus]
16038 Real essence and constitution differ? [Locke]
5444 One essence fixes individuals, the other kinds [Ellis]
5450 Is essence origin, properties or membership? [Kripke]
14656 People are essence, plus essential properties? [Plantinga]
12066 Aristotle's essentialism is not Kripke's [Witt]
11152 Essences are definitions or necessities [Fine,K]
14256 How to split basic and derived essence? [Fine,K]
14258 Maybe relationships can also be essential [Fine,K]
15184 Modal causal reference needs essences [Sidelle]
15681 Three questions map essentialism [Gelman]
14190 Deep intrinsic essence, or shallow contextual? [Paul,LA]
17313 Essences just to individuate things [Koslicki]

3. Individual Essences

each individual has its own distinct essence

13774 Each thing has a real essence [Plato]
11039 Primary substance reveals a 'this' [Aristotle]
12284 Everything has a single essence [Aristotle]
12311 Shifting particulars are undefinable [Aristotle]
17846 Essence of one thing is essence of particular [Aristotle]
12069 Essence causes unified substances [Aristotle]
12070 Individual essences are not universals [Aristotle]
12088 Essence is individual, not universal [Aristotle]
11998 Aristotle rejects individual essences [Aristotle]
12083 Essence explains substance's existence [Aristotle]
11382 Aristotle's essence is particular, not species [Aristotle]
16097 Specifiable subjects have essential properties [Aristotle]
12810 We know individuals without their kind [Locke]
16786 Individuals need a species as the standard [Locke]
15992 Very varied things fall under single names [Locke]
15990 Everything has an internal essence [Locke]
12931 The particular exemplifies the general [Leibniz]
12811 We can't really know individuals [Leibniz]
19575 Refined senses distinguish individuals [Novalis]
20376 Kind essence first, but that isn't individuals [Nietzsche]
14435 Essence is too vague for use in science [Russell]
16520 Kind, not individual, has necessary properties [Ayer]
15808 Individual essence is all necessary features [Chisholm]
16979 Nothing makes some thing an individual [Strawson,P]
13571 Skip individuals for scientific essentialism [Ellis]
11861 Forget individual essences [Wiggins]
14637 Only basic individuals have essences [McMichael]
11885 Individual essence for transworld identity [Forbes,G]
12014 Individual essences are unique to objects [Forbes,G]
12015 We can define non-trivial individual essence [Forbes,G]
11173 Being an x is consequent, not constitutive [Fine,K]

12244 Nominalism tolerates individual essences [Oderberg]
15121 Necessary and sufficient profile for a thing [Hawthorne]
11877 Individual essence is unavoidable properties [Mackie,P]
11882 An individual essence must be unique [Mackie,P]
11886 Individual essence has a dilemma [Mackie,P]
13230 Generality captures particular essences [Steiner,M]
15113 Perception individual, demonstration universal [Koslicki]
10940 Individual essence is unique to the object [Rami]

4. Essence as Definition

essence just is the successful definition of a thing

21259 Know a thing by name, definition and essence [Plato]
12146 Definitions are not essences [Aristotle]
10963 Essences are what occur in definitions [Aristotle]
10943 Definition is the mark of essence [Aristotle]
11292 Essence implies explanatory definition [Aristotle]
11287 Essence is the definition [Aristotle]
12091 No individual definition, so no essence? [Aristotle]
11200 Physical definitions must include material [Aquinas]
17865 An essence is an encapsulating formula [Descartes]
12981 Essences are possibilities [Leibniz]
12067 Essence is the references of definitions [Witt]
11179 Many definitions complicates essence [Fine,K]
14260 Essences follow from every definition [Fine,K]
16551 Knowing essence is knowing a definition [Lowe]
17309 Fine's essences are just real definitions [Koslicki]
17315 Keep essence and real definitions apart [Koslicki]
17866 Essence fixes existence and structure? [Almog]
17868 Definitions allow unintended twin cases [Almog]
17871 Fregean meaning is conceptual essence [Almog]
17872 You can't rely on mere snapshot-concepts [Almog]
17953 Concrete objects can't have real definitions [Vetter]

5. Essence as Kind

essence as belonging to a particular natural kind

11188 Essential properties sort things [Aristotle]
11196 Essences sort into categories [Aquinas]
13074 A kind is necessary for a real essence [Suárez]
17233 Particulars contain universal things [Hobbes]
12530 Essences as moulds for natural things? [Locke]
12532 Even real essence depends on a sort [Locke]
12539 One horse with many essences? [Locke]
21218 Essences are purely apprehensible [Husserl]
15106 Essence is expressed by grammar [Wittgenstein]
11908 'Same kind' won't support essentialism [Mackie,P]
12679 Essence is a kind's distinctive properties [Ellis]
17055 79 is part of the nature of gold [Kripke]
17523 Sortals basically apply to individuals [Ayers]
15143 Kinds are the base of a thing's causal powers [Bhaskar]
11895 Sortal essence is unlosable properties [Brody]
12141 Essences determine natural kinds? [Brody]
16509 Kinds are possible substance sortals [Wiggins]
12013 Essences need category and particulars [Forbes,G]
15678 Essence gives identity through categories [Gelman]
15683 Sortal categorisation decides essence [Gelman]
15697 Kind essentialism presumes natural kinds [Gelman]
12871 The kind determines the essence [Simons]
13129 Kinds too specific to be categories [Westerhoff]
11909 Water=H2O needs further support [Mackie,P]
11899 Why are any sortals essential? [Mackie,P]
15145 Kind essence is the membership properties [Chakravarty]
10939 Essence is being a particular kind [Rami]

6. Essence as Unifier

essence is what unifies the parts of a thing

11238 Greek essence fixes things [Plato]
11291 Essence is intrinsic nature [Aristotle]
10964 Essence is the criterion of substance [Aristotle]
12098 Essences cause their own unity [Aristotle]
11208 A simple substance is its own essence [Aquinas]
9109 Can existence and essence be separated? [William of Ockham]
17187 Essence is the root of things' existence [Spinoza]
12510 Not all identity is unity of substance [Locke]
11155 Essence makes things what they are [Locke]
12706 Bodies need a soul-like unifier [Leibniz]
12753 We need monads plus a substantial bond [Leibniz]
15637 Essence posits the unity of a thing [Hegel]
15262 In logic, essence is tied to what it is [Harré/Madden]

12137 All possible a's have property P [Brody]
12082 Unity and essence come in degrees [Witt]
3350 Could a horse continue but not be a horse? [Benardete,JA]
14222 An essence just is what the thing is [Shalkowski]
13804 Essential properties necessitate existence [Forbes,G]
13805 Nontrivial essence is grounded in a nature [Forbes,G]
11161 Essence pins down what a thing is [Fine,K]
15065 What an entity is is fixed before existence [Fine,K]
12240 Essentialism explains unity [Oderberg]
13797 Essences are necessary for an existence [Elder]
14191 Modal profiles fix objects' natures [Paul,LA]

7. Essence and Necessity

relation between essence and what is necessary

a. Essence as necessary properties

13083 Essence for necessity, concept for contingent [Leibniz]
11156 Essence is the without-which-not [Mill]
16997 Essential properties are always true of it [Kripke]
17045 De re modality is essential properties [Kripke]
13952 Essentialism is some properties are necessary [Cartwright,R]
12142 Essence is inescapable properties [Brody]
12143 Essential property iff necessary [Brody]
12761 A property in all worlds is essential [Stalnaker]
16467 'Essentially human' means he must be [Stalnaker]
14076 Essence is necessarily fulfilling a condition [Gibbard]
13793 Essence is properties of all counterparts [Lewis]
13969 Essential properties are the necessary ones [Soames]
18888 Essentialism is necessary properties [Salmon,N]
12012 Essentials are necessities for existence [Forbes,G]
13808 Essential relations hold in every world [Forbes,G]
11160 Essential properties are the necessary ones [Fine,K]
11158 Modal logic has clarified essentialism [Fine,K]
13072 Modern essences are essential predicates [Cover/O'Leary-Hawthorn]
17080 Essences are universal world functions [Cover/O'Leary-Hawthorn]
14380 Forget the necessary/essential distinction [Rocca]
17952 Essence is clearer as necessities [Vetter]

b. Essence not necessities

12262 'Idion' is necessary but not essential [Aristotle]
17246 Some accidents are permanent during existence [Hobbes]
17191 It something is ubiquitous it isn't essential [Spinoza]
13082 Complete concepts include contingents [Leibniz]
13189 Necessities are not essences [Leibniz]
11180 Modal theorems involve no essentialism [Marcus (Barcan)]
11186 Trivial necessities are not essential [Marcus (Barcan)]
11185 'Necessarily' doesn't replace 'essentially' [Marcus (Barcan)]
11993 Indispensible isn't essential [Kung]
12763 Necessary non-essential cases [Stalnaker]
11918 Essences need not include all necessities [Molnar]
13376 Essentialism is not just de re necessity [Jubien]
16537 Essence as necessities over-generates [Fine,K]
11163 Singleton necessity arises from singletons [Fine,K]
11164 Most necessities are irrelevant to essence [Fine,K]
11167 Essence precedes necessity [Fine,K]
9206 Essence is not necessary features [Fine,K]
12870 'Must' for propositions, 'must' for essences [Simons]
11248 Necessity two-way, essence one-way? [Politis]
13166 No essences in maths; it's all necessary [Mancosu]
10934 Unlosabe properties may not be essential [Rami]
16749 For Aristotelians, necessity isn't essential [Pasnau]

c. Essentials are necessary

17039 Predicates of what it is are necessary [Aristotle]
15107 Aristotle's essences aren't necessities [Aristotle]
12560 Necessary co-existence of properties obscure [Locke]
11997 Properties may be contingently essential [Kung]
13806 Existence, self-identity, de dicto are trivial [Forbes,G]
15172 Essence expresses necessary properties [Sidelle]
15687 Human essence has degrees and impermanence [Gelman]
15112 Essence implies necessary properties [Koslicki]
19262 Essence is necessary, but not vice versa [Vaidya]

8. Essence as Explanatory

essence is what intrinsically explains a thing

16972 Explanations give a thing's nature [Aristotle]
5084 A thing's nature causes stability and change [Aristotle]
12361 Is substance ontological or explanatory? [Aristotle]
11994 Essences are the start of a science [Aristotle]
11244 He has three views of metaphysics [Aristotle]

17184 All natures of things produce some effect [Spinoza]
16787 What is accidental in the explanation? [Locke]
5057 The subject entails its qualities [Leibniz]
10937 Essential properties explain the others [Copi]
11992 Essence defines, explains, attaches [Kung]
12144 Essences explain the other properties [Brody]
11871 Essences are not explanations [Wiggins]
17564 Star essence includes its anti-collapse energy [Inwagen]
12089 Essences explain unified existences [Witt]
17390 Kind explanation need not be essentialist [Dupré]
10935 Essence is bound up with identity [Fine,K]
13921 Thinking about things needs essences [Lowe]
16542 Explanation is too complex to fix essence [Lowe]
12247 Essence constitutive, not explanatory [Oderberg]
15181 Deep explanatory features are actual [Sidelle]
11906 Explanatory essence has modal implications [Mackie,P]

9. Essence and Properties

essence consists of a set of properties

16143 Substances aren't composed of qualities! [Aristotle]
14047 Permanent properties define a nature [Epicurus]
16633 The essence is one principal property [Descartes]
16028 Real essence gives identity and qualities [Locke]
12305 Essence determines other properties [Locke]
15985 Same essences means same properties [Locke]
12534 Essence decides necessary properties [Locke]
11878 Leibniz was an extreme essentialist [Leibniz]
13191 Properties flow from essence [Leibniz]
19263 The essential properties can't be varied [Husserl]
10923 Essentialism must make a distinction [Quine]
5462 Essential properties can be quantified [Ellis]
17030 Important doesn't mean essential [Kripke]
14646 A thing cannot lack its essential properties [Plantinga]
14653 Essential properties are defined by worlds [Plantinga]
14654 All objects share 'trivial' essentials [Plantinga]
14660 If ever essential, then always essential? [Plantinga]
14661 Essences are what entail a thing's properties [Plantinga]
14633 How do you spot an essential property? [Jackson]
14635 Essentially Fx is F in all x-worlds [Jackson]
15297 We infer new properties from essences [Harré/Madden]
12031 Essences are qualitative properties [Adams,RM]
11879 Predicate-modification shows essentialism [Wiggins]
14636 Essences are interesting necessary properties [McMichael]
14640 Essential properties: necessary and intrinsic? [McMichael]
13807 'Extraneous' essence depends on other objects [Forbes,G]
10936 Essentials must define an object [Fine,K]
15076 Essences are above circumstances [Fine,K]
12258 Properties are not part of an essence [Oderberg]
13794 Essential properties occur in clusters [Elder]
13796 Essential properties are bound together [Elder]

10. Essence as Species

essence for animals is the species they belong to

16149 Generic terms are not substantial [Aristotle]
16106 Man and horse are universal composites [Aristotle]
16144 Genera are not separate substances [Aristotle]
12359 Essence as genus, then essence as cause [Aristotle]
12068 Did Aristotle accept species-essence? [Aristotle]
16141 He later removes genera from his ontology [Aristotle]
13434 In ideas, essence and species are linked [Locke]
16035 Real essence species lack individuality [Locke]
16036 Species aren't fixed by hidden constitutions [Locke]
12906 Species is eternal, individuals exist [Leibniz]
12987 Some sorts have necessary membership [Leibniz]
16955 Is a species its structure or its descent? [Kripke]
16996 Whether he IS human; whether he might not be [Kripke]
17370 Impermanent species can still have essences [Devitt]
17368 Essentialism is of natures, not of categories [Devitt]
17388 Species lack essence so aren't natural kinds [Dupré]
17389 An essence of species could be replaced [Dupré]
17870 A tiger must be related to the tigers [Almog]

11. Essence of Artefacts

essence of objects made by creatures

16508 The best unity comes from inner nature [Aristotle]
16117 Artefacts have external maintenance sources [Aristotle]
12540 There are artificial kinds [Locke]
12177 Purpose of artefacts is essence [Popper]

16514 Matter and function determine artifacts [Wiggins]
17575 Artifact persistence involves intelligence [Inwagen]
12022 Same parts can't ensure same artefact [Forbes,G]
12025 Artefacts have fuzzy essences [Forbes,G]
13809 Is the bronze essential to the statue? [Forbes,G]
14295 Artefacts have dispositional essences [Mumford]
12873 Original parts are essential to artefacts [Simons]

12. Essential Parts

parts of objects seen as essential to it

16792 If parts change, the whole changes [William of Ockham]
12884 All parts are necessary for a whole [Leibniz]
12781 Substances are more than mere aggregates [Leibniz]
12139 All constituting parts are essential [Brody]
8443 Must an entity have exactly those parts? [Sosa]
14757 Mereological essentialism: all parts necessary [Sider]
12874 Essential parthood is transitive [Simons]

13. Nominal Essence

essence as derived from experiences of objects

16627 Only accidents distinguish horse from lion [Francis of Marchia]
17251 Essence is what names or picks out [Hobbes]
12812 Real essences, but cataloguing by ideas [Locke]
16031 Real essences won't explain kinds [Locke]
15646 Artificial 'gold' could actually be gold [Locke]
12306 Nominal essence is ingredients of sorts [Locke]
15988 Real essence explains, and isn't observable [Locke]
15644 Locke confuses properties and ideas [Eagle]
16029 Nominal essence resembles nominal definition [Locke]
12531 Nominal Essence is the idea of a name [Locke]
13433 Essence is verbal; names lack essence [Locke]
12533 Nominal essences fixes the sort [Locke]
12537 Nominal essence needs unity of the idea [Locke]
12557 Substances are ideas, but of the world [Locke]
12561 'Malleable' is in gold's nominal essence [Locke]
12975 A distinct idea of gold is not a perfect idea [Leibniz]
12805 Variation of resemblance - different reality [Leibniz]
12806 Can one instance show a natural kind? [Leibniz]
12308 Science merges nominal and real essence [Copi]
5448 Keep real and nominal essence separate [Ellis]
16510 Three objections to nominal essence [Wiggins]
11835 A sortal refers to a nominal essence [Wiggins]
7384 Words have fixed meanings without essences [Dennett]
14226 Attributes, not essences, distinguish things [Shalkowski]
14951 Essences keep track of patterns [Ladyman/Ross]
17869 Compromise of real and nominal essence? [Almog]
15642 Many real essences, one nominal essence? [Eagle]
15643 All the hidden properties are not equal [Eagle]
15645 Nominal essence is a set of properties [Eagle]

14. Knowledge of Essences

how we might know the essence of an object

12092 Individuals are epistemically prior [Aristotle]
12090 Knowledge of universals is only potential [Aristotle]
16742 Know essences via non-essence [Suárez]
4869 Experience cannot reveal essences [Spinoza]
12525 Substance essence is like triangle essence [Locke]
13431 We know a triangle's real essence [Locke]
13423 Why are there no names for essences? [Locke]
12694 Essence is distinct thinkability [Leibniz]
15613 We want an 'inner' object, not just predicates [Hegel]
11966 How to discover essential properties? [Chisholm]
11182 Beware of treating essences as objects [Marcus (Barcan)]
13971 We can know a priori what is essential [Kripke]
12100 Essences are necessary properties [Kripke]
13954 What grounds essentialism? [Cartwright,R]
13922 Essence is what-it-is, not another thing [Lowe]
16552 We have no essence-grasping faculty [Lowe]
12248 Are universal properties essential? [Mumford]
15679 Essentialism comes from categorisation [Gelman]
15698 Mothers don't teach kids essentialism [Gelman]

15. Against Essentialism

reasons to deny the existence of 'essences'

13772 Are essences private to each person? [Plato]
12251 Substantial forms explain nothing [Descartes]
16622 Essence is an artificial way to conceive bodies [Hobbes]
12804 No natural kinds, or can't classify them? [Locke]
12547 Each property is unpredictable. [Locke]

11862 Leibniz was not an essentialist [Leibniz]
7161 Essences of things are merely opinions [Nietzsche]
14170 Traditional concepts obscure ideas of change [Russell]
10929 Aristotelian essence has become verbal [Quine]
10930 Modal quantification needs essences [Quine]
8482 The essence of a mathematical cyclist? [Quine]
12136 Two legs are essential to cyclists [Brody]
13590 Essences are possible if contextual [Quine]
5451 Ancient essentialism is a bar to progress [Popper]
15753 Essence is too vague to use in theories [Armstrong]
18890 Putnam smuggles in his essentialism [Salmon,N]
13578 Empiricists reject essence as unity [Ellis]
8555 No essence guarantees identity [Shoemaker]
14632 Essences have an epistemological problem [Jackson]
13955 Necessity being analytic kills essentialism [Cartwright,R]
15266 Energy as essence improves our story [Harré/Madden]
12762 The bare particular fails in modal semantics [Stalnaker]
14077 Essentialism for dividing concreta is false [Gibbard]
14638 Essentialism has false implications [McMichael]
14678 Anything could have any property [Salmon,N]
14225 Essences are unknowable [Shalkowski]
12257 Not essence; collections of powers? [Oderberg]
15026 Essence is not metaphysically basic [Sider]
15173 Essence as microstructure is a convention [Sidle]
15709 Essences predict, but may not be real [Gelman]
14192 Essences arbitrary, and not reducible? [Paul,LA]
14197 Modal properties don't fix possibilities [Paul,LA]
15147 Cluster kinds share properties, not essence [Chakravartty]
17876 Essence is just collected classifications [Almog]

E. Objects over Time

1. Objects over Time

general ideas about sameness of objects over time
1504 Knowledge requires unchanging entities [Aristotle]
12503 Identity is same idea over time [Locke]
13182 Change is modifications to essences [Leibniz]
21300 Obvious quick changes soon undermine identity [Hume]
21299 Change undermining a whole is proportional [Hume]
1350 Identity presupposes no interruptions [Reid]
5626 The principle of persistence is a priori [Kant]
16991 Identity of objects over time is baffling [Kripke]
16503 The kind fixes identity over time [Wiggins]
9663 Perdure as parts, or endure as a whole [Lewis]
16233 What is identity through time in Gallois? [Hawley]
16025 If a thing changes, what undergoes the change? [Gallois]
14958 Objects are types with timed instances [Ladyman/Ross]
15396 Block objects with two successors? [Cameron]

2. Objects that Change

how identity fares when an object's properties change
16173 There are five modes of coming to be [Aristotle]
17042 The natural is a source of stability [Aristotle]
16159 Animate change just needs stable form [Aristotle]
16059 Identity actually requires change [Chrysippus]
1321 Interrupted objects are linked by the mind [Hume]
1330 Identity can survive change, as in a state [Hume]
15220 Does identity survive loss of powers? [Harré/Madden]
15222 Same identities survive loss of powers [Harré/Madden]
15296 Might mere numerical identity survive? [Harré/Madden]
14737 Temporary intrinsics; properties not relations [Lewis]
3309 Maybe winds lack essential identity [Benardete,JA]
6618 Substances keep identity through change [Lowe]
16193 'Adverbialism' is instantiation-at-a-time [Hawley]
16195 Presentism avoids the 'problem' of change [Hawley]
16202 Strict identity has the problem of change [Hawley]
18930 Change is have distributional properties [Cameron]

3. Three-Dimensionalism

objects extend in space, but not in time
15275 Continuous time is needed for 3D objects [Harré/Madden]
9664 Can things endure while changing shape? [Lewis]
9665 Three answers to the shape problem [Lewis]
12295 3D has stretch and entirety conditions [Fine,K]
12298 Motion requires entire presence [Fine,K]
8271 Enduring wholly present, perduring partially [Lowe]
16192 Two versions of time/properties for Endurance [Hawley]
16196 Endurance is a sophisticated theory [Hawley]

14727 3D has endurance and full presence [Sider]
14738 3D is inconsistent with time travel [Sider]
13924 Persistence is needed for explanation [Haslanger]
13930 Persistence makes change intelligible [Haslanger]

4. Four-Dimensionalism

objects extend in both space and time
14759 Things are long linked events [Broad]
11842 Dover Cliffs are just slow events [Broad]
14963 Are past phases parts of a thing? [Broad]
90194-D objects help predication and quantifying [Quine]
15271 Why would time-slices resemble one another? [Harré/Madden]
11876 Getting horses from horse-stages? [Wiggins]
16024 Four-D explain modal properties wrongly [Noonan]
12296 4D things are stretched and non-entire [Fine,K]
18882 When was the wedding? When was the bride? [Fine,K]
16026 Four-D has four different versions [Gallois]
8272 Only an object can individuate a temporal part [Lowe]
16191 Perdurantism needs an atemporal perspective [Hawley]
16197 Can perdurance explain future concerns? [Hawley]
16199 Sums of temporal parts have vast mass! [Hawley]
16201 Things are either stages, or sums of stages? [Hawley]
16240 Does perdurance give necessity to a lifetime? [Hawley]
14726 4D has temporal parts, perdurance and spread [Sider]
14728 Change is difference between parts [Sider]
14729 4D objects must always have parts [Sider]
14021 Worm Perdurantism, or Stage Perdurantism? [Crisp,TM]
12837 Four dimensional-objects are very odd [Simons]
14591 4D: instantaneous, not enduring, is the basic [Hawthorne]

5. Temporal Parts

things have parts in time, as they do in space
13267 Temporal parts mean ex nihilo creation [Thomson]
16209 Can a tiny slice have beliefs or desires? [Thomson]
17521 'Stages' need the concept of an object [Ayers]
17514 Temporal parts can't be split or rearranged [Ayers]
16023 Treat each stage as a whole object? [Noonan]
12297 3Dists can accept temporal parts [Fine,K]
17279 Even 3D can think about temporal parts [Fine,K]
16204 Stage Theory has too many objects [Hawley]
16203 What are stage links in Stage Theory? [Hawley]
16205 Stages too thin for substance or reference? [Hawley]
16206 Stages are as fine-grained as change itself [Hawley]
16212 Isolated stages can't be objects [Hawley]
16213 Extrinsic causal relations bind stages [Hawley]
14730 Temporal parts aren't components [Sider]
14731 Temporal parts are instantaneous [Sider]
14758 How do instantaneous parts believe things? [Sider]
14762 Temporal parts cause their successors [Sider]
13927 Do time-slices make the world inexplicable? [Haslanger]
13928 If old slices are separate, who needs them? [Haslanger]
14410 You and your segments have different beliefs [Merricks]
14561 Temporal parts have contingent order [Mumford/Anjum]

6. Successive Things

things which need time in order to exist
16691 A day exists actually and potentially [Aristotle]
16696 Successiva are really permanent [Bonaventura]
16698 Days exist, with non-existent parts [Burley]
16690 Successive things cannot exist all at once [Burley]
16695 Such things flow and differ over time [Oresme]
16703 Parts of successiva may be unconnected [Albert of Saxony]
16699 Parts can have succession without existence [Albert of Saxony]
16700 Enlarge the present, to talk of successiva [Wycliff]
16701 No successiva without non-now parts [Wycliff]
16694 Time and motion are successive things [Pasnau]

7. Intermittent Objects

objects which cease, and then return to existence
12505 Beginnings are unique to each thing [Locke]
21302 The parish makes a rebuilt church the same [Hume]
12851 Intermittence: rebuild a toy fort, same bricks [Chisholm]
16499 Things retain identity by sortal concepts [Wiggins]
16515 Things begin just once, when completed [Wiggins]
17577 Does a 'leap' make a new electron? [Inwagen]
12856 Are intermittent objects ever natural? [Simons]
12885 Intermittent objects are less unified [Simons]

8. Continuity of Rivers

is a river the same as the water in the river?
11091 You can't bathe in the same river stage twice [Quine]
427 You cannot step into the same river twice [Heraclitus]
579 You can't even enter the same river once [Cratylus]
16793 Persistence is each part being replaced [Buridan]
17257 Source is what matters to a river [Hobbes]
21303 A river's nature means identity through change [Hume]
15256 Humeans don't even understand 'river' [Harré/Madden]
3351 Rivers have identity, but the water changes [Benardete,JA]
21632 Rivers are events, but with boundaries [Williamson]

9. Ship of Theseus

does his ship remain if its parts are steadily changed?
16516 Theseus's ship now pilgrimages to Delos [Plato]
1212 Is a ship the same if all its timber changes? [Plutarch]
17256 Identical ships, one from the old planks? [Hobbes]
12853 Individuate the ship by matter, or by form? [Hobbes]
12972 Ships don't remain the same at all [Leibniz]
21301 Purpose keeps a varying ship the same [Hume]
16157 Insurance would follow original, not planks [Frede,M]
16517 Priests and antiquarians have different views [Wiggins]
11858 Identity with the original is the target [Wiggins]
17589 Vague identity means no Ship problem [Inwagen]
13381 Different if it's an 'object' or a 'ship' [Jubien]
13382 Same 'object', even if non-ship arrangement [Jubien]
4592 A boat is not the planks of which it is made [Heil]
4198 Limiting % change for identity won't work [Lowe]
4199 Renovation or reconstruction OK on own [Lowe]
4200 Reconstruction uses alienated parts [Lowe]
14741 The ship fissions asymmetrically [Sider]
12854 Both ships satisfy a criterion [Simons]
12855 There isn't just one answer to the puzzle [Simons]

10. Beginning of an Object

coming-to-be of a substance or object
457 Life and death are mixings of substances [Empedocles]
16574 Qualified ex nihilo creation is possible [Aristotle]
16572 Does this, or this-such, come to be? [Aristotle]
16573 Can a nothing produce coming-to-be? [Aristotle]
13214 A substratum underlies coming-to-be [Aristotle]
13215 'Alteration' keeps a perceptible substratum [Aristotle]
16706 Generation is combined local motions [Nicholas of Autrecourt]
18892 Nothing could oust my gametes [McGinn]
16583 Ex nihilo has weak and strong versions [Pasnau]

11. End of an Object

passing-away of a substance or object
12290 Destruction is dissolution of essence [Aristotle]
17205 Only an external cause can destroy something [Spinoza]
12303 Loss of essentials is destruction [Copi]

12. Origin as Essential

origin of an object is part of what is essential to it
12286 Identicals have the same origin [Aristotle]
11378 Origin does not explain an essence [Aristotle]
12101 Origin is not essential for definition [Aristotle]
11867 Only origin guarantees reference [Kripke]
12018 Someone's parents are essential [Kripke]
17046 Might the Queen have had different parents? [Kripke]
8274 Socrates might not have had an origin [Lowe]
12135 Interrupted objects begin twice [Brody]
14070 Persistence conditions make origin essential [Gibbard]
19280 Origin loses importance in some contexts [Lewis]
12102 Origin is too unique for Aristotle [Witt]
12019 Necessity of origin is just identity [Forbes,G]
12020 One's original sex couldn't differ [Forbes,G]
11165 Socrates' parents can't essentially exist [Fine,K]
13101 Two problems for necessity of origin [Cover/O'Leary-Hawthorne]
15696 People judge identity by a history [Gelman]
19214 Two persons, one origin, in twinning [Merricks]
12872 Zygotes are essential for sexual organisms [Simons]
11894 Tenacity, not necessity, of origin [Mackie,P]
19030 What exactly matters about origin? [Vetter]
19040 Origin is necessary if possibilities branch [Vetter]

13. No Identity over Time

objects are never strictly the same over time
2064 Heraclitus implies nothing at all stays still [Plato]

21322 Language treats changed things as identical [Reid]
6136 Physical eliminativism explains the Sorites [Merricks]

F. Identity among Objects

1. Concept of Identity

how we should understand the idea of identity
11380 Same ousia and essence? One thing! [Aristotle]
22143 Identity can be possibly different [Suárez]
22145 Independence is Major Real [Suárez]
22144 Difference of kind is Real Essential [Suárez]
22146 One-way dependence is Minor Real [Suárez]
22147 One thing seen in two ways is Conceptual [Suárez]
22148 Quite distinct but still needs it is Modal [Suárez]
19394 Inequality shades into equality [Leibniz]
1207 Identity makes no sense in number or unity [Hume]
21290 Multiple objects can never convey identity [Hume]
11874 Identity admits of no degrees [Reid]
21320 Identity is common sense, but indefinable [Reid]
1367 Identity requires continued existence [Reid]
16022 A criterion for identity is a Fregean idea [Frege]
11100 Identity is substituting equals for equals [Frege]
4893 How can identities be informative? [Frege]
6056 Identity is not a relation between objects [Wittgenstein]
17595 Uniting ostensions needs prior identity [Quine]
18965 Identity is a necessary part of ontology [Quine]
15475 'Identity' must tolerate some change [Martin,CB]
15486 Only abstracta have perfect identity [Martin,CB]
18389 Containment and overlap give partial identity [Armstrong]
16981 Self-id and Leibniz make identity 'internal' [Kripke]
17509 Must a concept complete an identity? [Ayers]
4885 Identity is a very weak relationship [Perry]
11843 Over-time and at-a-time are the same [Wiggins]
11864 Phosphorus necessarily equals Hesperus [Wiggins]
17588 Transitivity is only of definite identity [Inwagen]
6058 Identity propositions are not tautological [McGinn]
11888 Intrinsic facts must ground identities [Forbes,G]
15603 Showing sameness needs different names [Fine,K]
10522 Identity criteria use equivalence relations [Hale]
8970 Identity is needed to equate sets [Hawthorne]

2. Defining Identity

whether identity can be defined - and how
17594 Paraphrase '=' as 'if Fx then Fy' [Quine]
10797 Substitutivity won't fix identity [Marcus (Barcan)]
9848 Identity precedes replaceability [Dummett]
9842 Identity needs criteria but is indefinable [Dummett]
16497 Leibniz's Law is identity's hallmark [Wiggins]
16498 Definitions need identity, so can't define it [Wiggins]
16502 Identity is primitive [Wiggins]
11831 Identity needs Leibniz Law and reflexivity [Wiggins]
16015 The concept of identity seems inescapable [Noonan]
16016 Identity definitions tend to be circular [Noonan]
16017 Identity: equivalence plus Leibniz's Law [Noonan]
16020 Identity definition has to second-order [Noonan]
6053 No concept is more basic than identity [McGinn]

3. Relative Identity

identity can only ever be in respect of some feature
16794 Same body and same human are different [Hobbes]
16795 Sameness differs according to the idea [Locke]
12153 Does 'being same F' split in two? [Perry]
17653 'Same?' always needs 'Same what?' [Goodman]
16075 Denying absolute identity is bad logic [Wasserman]
12152 Identity must be stated relatively [Geach]
17512 Concepts for diachronic, not synchronic, id.? [Ayers]
13953 Ostensions of objects don't need sorts [Cartwright,R]
12155 Relative identity is just resemblance [Perry]
14362 Relative Identity flouts Leibniz's Law [Wiggins]
11838 Does identity totally depend on category? [Wiggins]
11847 Identifying items needs a common sort [Wiggins]
14755 Identity is with respect to times, not pure [Gallois]
8305 Kind-concepts precede identity-criteria [Lowe]
10321 Identity without a criterion seems possible [Hale]
15185 'Same' is unclear, and needs individuation [Sidelle]
4640 Identity must be based on properties [Baggini /Fosl]
16074 Is relative identity about 'identity'? [Wasserman]

4. Type Identity

being identical in category
17848 Things can be alike but not the same [Aristotle]
10024 Type-token is universal-particular [Armstrong]
13945 Tokens aren't unique occurrences [Cartwright,R]
6043 Type-identity is close similarity in qualities [McGinn]
6044 Qualitative identity is property identity [McGinn]
6046 Qualitative identity is true identity of type [McGinn]
6045 Best to just speak of identity or resemblance [McGinn]
8290 Type-identical objects differ only in matter [Lowe]
13920 All things are of some general kind [Lowe]
4647 Same car as you; same fiancée as you! [Baggini /Fosl]
6157 Tokens are particular, types are kinds [Rowlands]

5. Self-Identity

relation of identity holding between a thing and itself
3315 Self-relation is a special privileged relation [Benardete,JA]
16134 To know a self-identity, know the object [Aristotle]
17847 You are one with yourself in form and matter [Aristotle]
12504 Uniqueness leads to self-identity [Locke]
3144 Everything is what it is and not another thing [Butler]
21289 Self-identity merely expresses unity [Hume]
21292 Self-identity is only meaningful over time [Hume]
3318 Frege made identity a logical notion [Frege]
6057 Identity of two things or one are nonsense [Wittgenstein]
10193 Self-identity is a useless tautology [Black]
15806 'Being identical with me' - individual concept [Chisholm]
10728 The universal self-identity is impossible [Armstrong]
17680 Self-identity is a pseudo-property [Armstrong]
17044 Identity is the smallest reflexive relation [Kripke]
14657 Self-identity seems a harmless property [Plantinga]
13847 Non-existent self-identicals: 'null object'? [Bostock]
15968 Self-identity for all; no identity to others! [Lewis]
6054 Holmes exists, but is not self-identical [McGinn]
6066 Self-identity extends beyond mere existence [McGinn]
3314 A thing might exist relative to itself [Benardete,JA]
3323 Non-existent things have self-identity [Benardete,JA]
15073 Self-identity has existence as an extra [Fine,K]
15604 Do Cic=Cic and Cic=Tully differ? [Fine,K]

6. Identity between Objects

two objects turning out to be one object
15847 Four relations are possible of two things [Plato]
15825 Carneades denied the transitivity of identity [Carneades]
9853 Identity partly means 'between objects' [Frege]
18440 Physical objects are identical iff coextensive [Quine]
17036 Identity by description can be contingent [Kripke]
17038 Identicals can't possibly be non-identical [Kripke]
9905 Identity needs individuating conditions [Benacerraf]
16224 Vague identity between things is impossible [Evans]
16521 A nec= A, B = A, to B nec= A [Wiggins]
14073 Does contingent identity break Leibniz's Law? [Gibbard]
15969 Two things can never be identical [Lewis]
6047 Identity is necessary, but not the statements [McGinn]
5494 Objects have synthetic a posteriori identity [Lycan]
15074 Even impossible objects could be identical [Fine,K]
16231 Maybe being identical is temporary? [Gallois]
16027 Equality involves necessity on both sides [Gallois]
16360 Informative identities link mental files [Recanati]
14081 Identities might be true, despite vagueness [Schaffer,J]
14476 Identities must specify categories [Thomasson]
14477 Identicals must be of the same category [Thomasson]

7. Indiscernible Objects

objects between which no differences are detectable
489 Each thing must be in some way unique [Diogenes of Apollonia]
13788 A duplicate is a second item [Plato]
17175 There can't be two things with same attributes [Spinoza]
16504 Two eggs can't be indiscernible [Leibniz]
5055 No two things are identical [Leibniz]
13178 Difference of location changes the thing [Leibniz]
19412 Different environment also matters [Leibniz]
19411 Lines aren't identical, so bodies can't be [Leibniz]
17554 Two beings must differ in some way [Leibniz]
7576 Identity of Indiscernibles is true of concepts [Kant]
14509 We distinguish water drops by location [Kant]
11849 Two items with same properties makes sense [Wittgenstein]
14107 Terms sharing classes are identical [Russell]

12033 Self-identity isn't shareable [Russell/Whitehead]
11095 Identify if temporarily indiscernible [Quine]
10195 Two identical spheres are indiscernible! [Black]
5477 Looking different isn't being different [Ellis]
14510 Indiscernible events in a cyclical universe? [Adams,RM]
12034 Indiscernible events might recur in cycles [Adams,RM]
16455 Two globes are one, in curved space? [Adams,RM]
12130 Indiscernibles are trivially identical [Brody]
16453 Id. of Indiscernibles is necessary for bundles [Stalnaker]
16505 Indiscernibility rules out symmetrical objects [Wiggins]
4033 Spheres are identical but indiscernible [Campbell,K]
7566 Identity of Indiscernibles is the Verif. Princ [Jolley]
13379 How do you prove identity across time? [Jubien]
3145 Leibniz's Law is trivial, its converse not so [Rey]
13730 Indiscernibility is tricky in modal logic [Fitting/Mendelsohn]
4203 Properties fix identity, or vice versa? [Lowe]
4476 The identity of indiscernibles is false [Moreland]
13702 Indiscernibles is nec if membership a property [Sider]
4639 Identity in the objects or in their perception [Baggini /Fosl]
5746 Indiscernibles' identity: contentious/trivial [Melia]
10198 Indiscernibles have possible differences [Zimmerman,DW]
10199 Only discernible in counterparts? [Zimmerman,DW]
7927 Leibniz had three versions of his Law [Macdonald,C]
7928 Identity of Indiscernibles is not necessary [Macdonald,C]
18764 'Properties' are unclear for indiscernibles [Anderson,CA]

8. Leibniz's Law

identical objects must have identical features or truths
11840 Only identicals have the same attributes [Aristotle]
16768 Different truths mean different entities [Duns Scotus]
17255 Different truths means different bodies [Hobbes]
17173 Different attributes means different things [Spinoza]
16073 Leibniz's Law needs relativised identity [Geach]
4942 Identicals must be indiscernible [Kripke]
11839 Leibniz applies to '=' and 'same'? [Wiggins]
11845 Substitutivity needs Leibniz's Law [Wiggins]
14065 Identicals must share start and finish [Gibbard]
14074 Leibniz's Law must involve properties [Gibbard]
16018 Identity rests on indiscernibility [Noonan]
16019 Leibniz's Law won't ensure substitutivity [Noonan]
6050 Leibniz's Law presupposes property identity [McGinn]
6049 x = y iff for all P, Px iff Py [McGinn]
6048 Leibniz's Law is absolutely basic to identity [McGinn]
12236 Leibniz's Law is essentialist [Oderberg]
16225 Fa and ¬Fb rules out a=b [Hawley]
14754 Give up Leibniz's Law, give up identity! [Sider]

9. Sameness

how we should understand two things being 'the same'
12266 Three ways to be 'the same' [Aristotle]
12287 Same thing, same properties [Aristotle]
12288 Numerical and generic sameness [Aristotle]
8650 Identity is salva veritate substitution [Leibniz]
21315 Popularly, or strictly 'the same'? [Butler]
15826 'Loose' identity can shift properties/truths [Chisholm]
11910 Being just 'the same' is meaningless [Geach]
16999 A vague identity may seem intransitive [Kripke]
16494 Sameness of substance, not of qualities [Wiggins]

10. Modality

A. Necessity

1. Types of Modality

family of modalities that includes necessity and possibility
18797 Modalities relate concepts to cognition [Kant]
12205 Modality: metaphysical and epistemic [Edgington]
14625 Necessity and possibility are counterfactual [Williamson]
10709 Priority is a modality, based in sets [Potter]
14528 We must see necessity, in basic reasoning [Hale/Hoffmann,A]
17535 Dispositionality has a unique modality [Mumford/Anjum]
14579 Necessity and possibility rest on dispositions [Mumford/Anjum]
14580 Dispositions show us modal truths [Mumford/Anjum]

2. Nature of Necessity

understanding the concept of necessity
12381 Necessity cannot be otherwise [Aristotle]
12611 Necessity makes alternatives impossible [Aristotle]
12734 All necessities are demonstrable [Leibniz]

13828 Necessary truths are provable truths [Leibniz]
12190 Necessity is true 'whatever' [Mill]
16013 Nothing necessary can come into existence [Kierkegaard]
7134 Things aren't true because they're irrefutable [Nietzsche]
8375 Functions true for all values are necessary [Russell]
6099 Modals concern propositional functions [Russell]
11002 S4 necessity: informal provability [Lewis,CI]
10921 Necessity varies in sentence-involvement [Quine]
11880 The necessity of a posteriori is a priori [Kripke]
15290 Reducing possibility leads to necessity [Harré/Madden]
8822 Talk of necessities may not be necessary [Pollock]
15086 Absolute necessity: logical OR metaphysical? [Hale]
11001 S5 necessity: true in all possible worlds [Read]
5738 How do we know when necessity is necessary? [Melia]
11083 Necessity can be in a set of possible worlds [Hanna]
16346 Is necessity a predicate, like truth? [Halbach]
17742 Scotus began basing modality on consistency [Walicki]
19008 Modality is a type of quantification? [Vetter]
19029 Necessary p is no potential for not-p [Vetter]

3. Types of Necessity

different ways in which things must be

1690 Stones move up & down by different necessities [Aristotle]
21389 If future necessity logical or causal? [Long]
21362 Physical, logical, maths, moral necessities [Schopenhauer]
9442 The only necessity is logical necessity [Wittgenstein]
13576 Grounds, not modality, distinguish necessities [Ellis]
6987 Keep our concept of necessities simple [Jackson]
15291 Absolute or relative necessity [Harré/Madden]
16466 Strong necessity always true; weak not false [Stalnaker]
14680 Nomological in Metaphysical in Natural [Salmon,N]
9205 Metaphysical, natural and normative necessity [Fine,K]
15079 'Conceptual' necessity: concepts plus logic [Lowe]
16533 Metaphysical includes logical necessities [Lowe]
8261 Metaphysical but non-logical necessity? [Hale]
15080 'Relative' necessity is a logical consequence [Hale]
15081 'Stronger' necessities entail weaker ones [Hale]
19286 Unrestricted necessitation is 'absolute' [Hale]
19288 Necessities differ in vocab, and entities [Hale]
19290 Absolute necessities are necessarily necessary [Hale]
13721 'Weak' necessity needs things to exist [Sider]
4646 How do we know 'events have causes'? [Baggini /Fosl]
7800 Analytic truths of logic and of concepts [Girle]
9482 Necessary by laws isn't a new necessity [Bird]
13244 Necessity just in some situations [Beall/Restall]
10933 Physical - metaphysical - logical possibility [Rami]
14703 'Superficial' and 'deep' necessity? [Schroeter]
14532 Necessity in logical consequence is distinct [Rumfitt]

4. De re / De dicto modality

modes of reality, or modes of statement about it

14641 Necessity of major premise carries through [Aristotle]
8481 De dicto/De re originates with Abelard [Abelard]
14645 Necessarily <7 depends on mode of reference [Quine]
14975 De dicto is true of different objects [Cresswell]
14642 'De dicto' of statements; 'de re' of properties [Plantinga]
14643 'De re' and 'de dicto' truths come apart [Plantinga]
14649 Will 'de re' translate into 'de dicto'? [Plantinga]
14652 De re is just as clear as de dicto [Plantinga]
16079 De re modal predicates are ambiguous [Lewis]
14223 De dicto necessity is a type of de re [Shalkowski]
12003 De re needs transworld identity [Forbes,G]
15420 De re confuses sentences and objects? [Burgess]
15175 De dicto modality does not depend on identity [Sidelle]
5732 'De re' of things, 'de dicto' of propositions [Melia]

5. Metaphysical Necessity

inescapable necessity as a feature of reality

444 Truth studies what necessarily exists [Parmenides]
12668 Metaphysical necessity is truthmaking [Ellis]
15099 Beyond the nomological needs metaphysical [Shoemaker]
15161 Metaphysical necessity exceeds the logical [Soames]
15162 Metaphysical necessity is intuitive [Soames]
14677 Metaphysical necessity is wholly unrestricted? [Salmon,N]
14679 Metaphysical modality has restrictions [Salmon,N]
14685 Necessity is NOT truth in all possible worlds! [Salmon,N]
14688 With impossibles, metaphysical has S5 logic [Salmon,N]
14690 The S5 view overlooks nested modalities [Salmon,N]

16424 Metaphysical has fewer worlds than logical [Chalmers]
16425 Metaphysical necessity is just bizarre [Chalmers]
9209 Metaphysical necessity: worldly or transcendent [Fine,K]
12207 Metaphysical possibility bows to nature [Edgington]
16063 Metaphysical is 'broad' logical necessity [Lowe]
16531 Metaphysical nec. is objective and absolute [Lowe]
3105 There are several different kinds of necessity [Segal]
15082 Metaphysical necessity is never not-p [Hale]
13707 Is metaphysical accessibility intransitive? [Sider]
18850 The status of laws of nature is 'metaphysical' [Rosen]
18849 Metaphysical necessity: universal and absolute [Rosen]
18858 Necessary existence may be a relative matter [Rosen]
18857 Standard MN: P holds in worlds of our form [Rosen]
18856 Non-Standard MN: ~P incompatible with things [Rosen]
14094 Metaphysical 'necessity' cannot be defined [Rosen]
16277 Metaphysical modality is distinct from logical [Maudlin]
11086 Metaphysical necessity is 'weak' or 'strong' [Hanna]
18816 Metaphysical modality respects actual identity [Rumfitt]
17959 Metaphysical necessity is very empirical [Vetter]

6. Logical Necessity

necessity because of logic or definitions

12259 Reasoning is what necessarily follows [Aristotle]
17852 Denial of necessity brings contradiction [Aristotle]
16490 Experience can feel logically necessary [Russell]
12188 Quine accepts logical necessity [Quine]
9001 Certainty must precede apriori synthetic [Quine]
15230 Logical necessity rests on logical form [Harré/Madden]
13820 Is what is proved always necessary? [Bostock]
15083 Logical necessity is valid conclusion [McFetridge]
15084 Logical necessity fixes a conditional [McFetridge]
12181 Logical necessity entails the others [McFetridge]
12180 Logical necessity is necessary validity [McFetridge]
12183 Logical necessity blocks all falsehood [McFetridge]
12184 Logical necessity overrides the others [McFetridge]
12192 Logical necessities are deduced from anything [McFetridge]
12189 Logical necessity involves a decision [Wright,C]
14681 Logical necessity allows all of S5 logic [Salmon,N]
13394 Mutual necessity ensures entailment [Jubien]
15417 Logical necessity has two aspects [Burgess]
15419 Use S5 for |=, and use S4 for |- [Burgess]
12185 Logical necessity is epistemic necessity [Edgington]
12206 Logical necessity is epistemic [Edgington]
12208 Validity is a priori necessity [Edgington]
10258 Logical modality OK, thanks to models [Shapiro]
8260 Strict, narrow or broad logical necessity [Lowe]
16973 Priority: logical consequence or necessity? [Correia]
15085 'Broad' logical necessity is from concepts [Hale]
15088 Logical concepts make logical necessities [Hale]
19285 Logical necessity is true no matter what [Hale]
19287 Each logic produces its own necessity? [Hale]
13709 Logical truth is necessary if anything is [Sider]
18848 Is logical necessity a special type? [Rosen]
9481 Logical necessity is not a real necessity [Bird]
18478 Logical is not the only necessity [MacBride]
11084 Logical necessity is analyticity [Hanna]
16042 Metaphysical/logical necessity same strength? [Bennett,K]
22150 Logical possibility needs sound concepts [Boulter]
12193 Logical necessity rests on contradiction [Rumfitt]
12200 Logical necessity is not a priori [Rumfitt]
12202 Some logical necessity is metaphysical [Rumfitt]
18825 S5 is the logic of logical necessity [Rumfitt]

7. Natural Necessity

necessary facts about the physical world

5047 Physical necessity is required by perfection [Leibniz]
5594 Natural necessity is in appearances [Kant]
15884 Natural necessity is true for the mechanisms [Harré]
4797 Laws are based on a posteriori necessity [Kripke]
17037 Is physical necessity maximal necessity? [Kripke]
17058 Much physical necessity is totally necessary [Kripke]
4970 Apparent physical necessity is total necessity [Kripke]
15214 Natural necessity is not logical or contingent [Harré/Madden]
15221 Natural necessity relates natures to powers [Harré/Madden]
15224 The nature of the actual produces necessity [Harré/Madden]
15232 Natural necessity rests on actions of powers [Harré/Madden]
15288 Science is either logical or contingent? [Harré/Madden]

15289 Natural necessity is made by essences [Harré/Madden]
11978 Causal necessities hold, with the laws [Lewis]
2730 'Gold is malleable' is necessary non-analytic [Audi,R]
14676 Natural necessity is intransitive [Salmon,N]
11085 Nomological necessity is truth with our laws [Hanna]
14552 Essential mechanisms produce natural necessity [Mumford/Anjur]

8. Transcendental Necessity

preconditions necessary for knowing the world

3016 Even gods must accept necessity [Pittacus]
450 Being must have a limit, to be perfect [Parmenides]
490 Everything happens by reason and necessity [Leucippus]
15231 Our knowledge needs transcendental necessity [Harré/Madden]
15234 Every logical necessity is transcendental [Harré/Madden]
15064 'Necessary' truths, and 'transcendent' truths [Fine,K]

9. Normative Necessity

necessities of duty or ethical requirements

9240 Love creates a necessity of care [Frankfurt]

10. Impossibility

negative necessity - what never could be the case

5998 What never happens is impossible [Diod.Cronus]
17183 Impossibility is contradiction, or no cause [Spinoza]
3946 Internal contradiction proves impossibility [Berkeley]
9428 Nothing we imagine is absolutely impossible [Hume]
16426 The a posteriori only concerns the actual [Chalmers]
14377 Possibility is manifestation of power [Jacobs]

11. Denial of Necessity

there is nothing necessary about the real world

4766 Necessity is in the mind, not in objects [Hume]
7186 It is necessary that we believe something [Nietzsche]
4528 A priori truths are provisional assumptions [Nietzsche]
9362 Necessities are maintained no matter what [Lewis,CI]
9201 Necessity depends on type of description [Quine]
15090 Quine undermined necessary truths [Quine]
10927 Necessity by specification, not of objects [Quine]
10924 Necessity is in speech, not in things [Quine]
4577 The strongest necessity is natural regularity [Quine]
8206 Necessity is generalisation about classes [Quine]
8483 Necessity is relative to context [Quine]
4718 All necessity is verbal, hence 'de dicto' [Putnam]
14919 Empiricists reject objective modality [Fraassen]
19284 Necessity is just falsity seeming impossible [Blackburn]
20475 Maybe modal sentences cannot be true or false [Casullo]
11119 De re necessity is a form of de dicto [Jubien]
3888 For empiricists necessity is de dicto [Scruton]
9200 Empiricists say modality is just regularity [Fine,K]
14589 Many modals seem wholly context-dependent [Hawthorne]
14598 Only nominalists deny brute necessities [Dorr]

B. Possibility

1. Possibility

general ideas about what is possible

15779 Possible is non-necessity of the contrary [Aristotle]
15769 Anything which is possible will happen [Aristotle]
20832 Only what will happen is possible [Diod.Cronus]
20790 Possibles are true if nothing stops them [Stoic school]
22142 Only logic limits divine omnipotence [Anon (Par)]
13084 How is the impossible possible? [Leibniz]
12779 Some possibilia fail, for a reason [Leibniz]
5566 How do possible, actual and necessary relate? [Kant]
18795 Logical possibility is non-contradiction [Kant]
5613 It is possible if there is no contradiction [Kant]
21410 Consistent concepts are not possibilities [Kant]
14786 Intrinsic logical possibility or compatibility [Peirce]
8361 The actual may no longer be a possibility [Wright,GHv]
15782 Must possibilia be individuated? [Quine]
15542 Possibility is recombination of the actual [Armstrong]
10269 Mathematics formally eliminates possibility [Putnam]
5479 Science should show the limits of possibility [Ellis]
8554 Actual world changes show possibilities [Shoemaker]
17059 No creature could possibly be a unicorn [Kripke]
3697 Possibility logically precedes necessity [Bonjour]
12653 Five different types of possibility [Fodor]
11963 Truthmakers for possibilia? [Molnar]
9212 Possible states of affairs aren't propositions [Fine,K]
16131 What do principles and categories permit? [Lowe]

4195 Syllogistic reason must grasp impossibility [Lowe]
15568 Possibilities are real things to consider [Pol't]
7801 There is a hierarchy of possibility [Girle]
5739 We can count the ways a thing is possible [Melia]
8941 Possible worlds won't explain possibility [Fisher]
14376 Possibilities depend on actual substances [Jacobs]
14578 Possibility: non-contradict, recombine, worlds? [Mumford/Anjum]
19378 Possibles must occur, or are non-contradictory [Arthur, R]
18824 Determinables are real properties [Rumfitt]
18828 Compatibility means having a shared determiner [Rumfitt]
17955 Possible worlds express degrees of possibility [Vetter]
17957 Maybe possibility is potentiality [Vetter]
19010 Possibility rests in individual potentialities [Vetter]
19013 Possibility is an abstraction from potential [Vetter]
19028 Possibilities are abstracted potentialities [Vetter]

2. Epistemic possibility

what seems to be possible, given what is known

12182 Epistemic is independent of logically possible [McFetridge]
16532 'Epistemic' necessity is just certainty [Lowe]
10932 Epistemically possible - 'for all I know' [Rami]

3. Combinatorial possibility

possibilities are combinations of the actual

18618 Possibility is recombinations of reality [Mumford]
18619 Are all elements of reality combinable? [Mumford]
18620 There might have been more elements [Mumford]
18855 Combinatorialism assumes fixed syntax [Rosen]

4. Potentiality

possibilities of some specific thing

11254 Matter is potentiality [Aristotle]
15777 Potentiality is principle of change or process [Aristotle]
15778 Lack of power destroys things [Aristotle]
14544 Potentiality is for conditional action [Aristotle]
15774 We recognise potentiality from actuality [Aristotle]
12250 Potency explains change [Oderberg]
19009 Potentiality explains, so don't explain it [Vetter]
19019 Potentiality is the genus of dispositions [Vetter]
19022 Water can potentially potentially break [Vetter]
19025 Potentialities are weaker than dispositions [Vetter]
19027 Potentiality logic should be modal system T [Vetter]
19031 Potential 'to', but possibility 'that' [Vetter]

5. Contingency

facts which could be otherwise

6215 Contingent means the cause is unperceived [Hobbes]
4299 Contingency is an ignorant illusion [Spinoza]
4824 'Contingent' is imperfect knowledge [Spinoza]
4839 Reason sees necessity, imagination contingency [Spinoza]
5040 Contingent truths are infinitely analysable [Leibniz]
4307 Contingent existence needs a reason [Leibniz]
21533 Shifting tensed verbs produce contingency [Russell]
17693 Contingency implies possibilities are real? [Armstrong]
14895 Contingency is 'superficial', or 'deep' [Evans]
19660 'Precarious' if doomed; otherwise 'contingent' [Meillassoux]

6. Probability

asserting the degree of likelihood of a fact

2216 We assess the future by weighing known effects [Hume]
19142 Axiomatise probability - but what is it? [Davidson]
19305 The Gambler's Fallacy is short-sighted [Harman]
19310 Highly probable premises - unlikely conclusion [Harman]
7448 Statistical and epistemological probability [Hacking]
7447 Probability was mastered 1654-1812 [Hacking]
7449 We base probability on logic or coherence [Hacking]
13857 Do irrelevant cases affect possibility? [Edgington]
14281 Probability is just summing to 100% [Edgington]
14284 Valid arguments preserve improbabilities [Edgington]
6796 There is subjective and objective probability [Bird]
6797 Probability of tails is a fact about a coin [Bird]
14903 Single-case quantum probabilities? [Ladyman/Ross]
14923 Two quantum states of probability are one [Ladyman/Ross]

7. Chance

facts that seem to have no particular cause

13106 Maybe choices cause coincidences [Aristotle]
13108 Chance is a coincidental cause [Aristotle]
13110 Chance is just a secondary cause [Aristotle]
2215 There is no such thing as chance in the world [Hume]

14804 The laws are unchanged in all chances [Peirce]
19252 Objective chance is part of a distribution [Peirce]
15560 Explain chances, but not why that one [Lewis]
20146 Luck is inexplicable causal intersections [Kekes]
19671 Chance relies on unchanging laws [Meillassoux]

8. Conditionals

truths that depend on other truths

a. Conditionals

7803 How do we translate 'If...then'? [Lewis, CI]
14286 In nearby A worlds If A, B tracks B [Stalnaker]
14283 A conditional isn't one proposition [Lewis]
15422 Conditionals: Materialism? Idealism? Nihilism? [Burgess]
15423 Do negations of conditionals mean anything? [Burgess]
13853 Conditionals are not about the world [Edgington]
13768 Contingent conditionals may not be certain [Edgington]
14623 Conditionals imply counterfactuals [Williamson]
10989 Are conditionals truth-functional? [Read]
10992 Conditionals affirm modus ponens [Read]
11017 Do conditionals express propositions? [Read]

b. Types of conditional

9014 'Not' and 'and' explain some conditionals [Quine]
14360 Subjunctive poss worlds, indicative no truth? [Jackson]
13770 Conditionals come in many varieties [Edgington]
14269 Future indicatives belong with subjunctives? [Edgington]
14270 All indicative conditionals form one group [Edgington]
13716 Counterfactuals/indicative conditionals differ [Sider]

c. Truth-function conditionals

20789 False: false and contradicts the antecedent [Stoic school]
12197 Inference needs two truths, not necessity [Russell]
14450 All implication is truth-functional [Russell]
14305 A match is soluble if never immersed? [Carnap]
13856 Exact conditionals are truth-functional [Grice]
8948 Normal conventions make the conditional odd [Grice]
13767 Conditionals truth-function; rest is pragmatic [Edgington]
15725 False antecedent is a truth-value gap [Quine]
14288 'If A, B' is a 'robust' material conditional [Jackson]
13769 Conditional assertions should be confident [Jackson]
13858 Robust antecedent, good conditional [Jackson]
14289 Learning an antecedent kills some conditionals [Jackson]
14354 A & B is true when A, B same truth value [Jackson]
14355 A & B is T when A is F and B is T [Jackson]
14353 A & B must be F when A is T and B is F [Jackson]
14361 Indicative conditionals are truth-functional [Lewis]
13764 Do A and B determine the truth of 'If A, B'? [Edgington]
13765 For modus ponens, If A, B entails $\neg(A \& \neg B)$ [Edgington]
14274 Basic inferences support truth-functionalism [Edgington]
14275 Truth-functionalism is fine in maths [Edgington]
14276 A is unlikely, so probably A & sup B? [Edgington]
14290 Truth-functional command has alarming result! [Edgington]
14309 Distinguish causal and accidental conditionals [Mumford]
8947 Conditionals can imply contradictions [Fisher]

d. Non-truthfunction conditionals

14304 Conditionals: A true, so B necessarily true [Diod. Cronus]
14303 Falsify conditionals: A is true, B false [Peirce]
13766 'If' rests on degree of belief in the given [Ramsey]
10993 Believe consequents if you believe antecedents [Ramsey]
14358 Possible worlds make MPP and MTT work [Jackson]
14359 Conditionals are not proper assertions [Jackson]
14357 Possible worlds are silent for false A [Jackson]
10994 Minimal revision makes a conditional true [Stalnaker]
13855 Conditionals lack truth conditions [Edgington]
13859 Believe if A, B if A & B is likely [Edgington]
14271 Non-truthfunctionalist deny clear truth-values [Edgington]
14272 A falsehood makes a conditional true? [Edgington]
14311 Dispositions are not strong conditionals [Mumford]
14185 Conditionals are shorthand for a proof [Read]
8949 Relevance conditionals help information flow [Fisher]

e. Supposition conditionals

19232 The antecedent is normally assumed true [Peirce]
14279 Try adding the antecedent to your knowledge [Ramsey]
15722 Conditionals need unsure antecedents [Quine]
13854 Conditionals show outcomes of suppositions [Edgington]
14282 If A, B? Ask, is A & B nearly as likely as A? [Edgington]

f. Pragmatics of conditionals

14277 Believe some propositions, don't say them [Grice]

10990 Are conditionals sometimes unassertable? [Grice]
9723 'If' is conditional if A-implies-B [Enderton]
14356 Conditionals can express lack of relevance [Jackson]
14278 Assertable conditionals we don't believe? [Edgington]
14287 Context fixes meaning of 'If A, B'? [Edgington]

9. Counterfactuals

facts in worlds different from the actual world

12191 Implication makes counterfactuals true [Goodman]
15719 We feign belief for counterfactuals [Quine]
15720 Counterfactual antecedents are contextual [Quine]
15721 Dispositional counterfactuals are best [Quine]
15724 Counterfactuals are not needed for science [Quine]
3406 Counterfactuals use logic or possible worlds [Kim]
15260 Counterfactuals analyse powers nicely [Harré/Madden]
8434 Possible worlds define counterfactuals [Lewis]
8425 Define true counterfactuals by close worlds [Lewis]
15462 Backtracking goes from possible event to cause [Lewis]
8431 Stalnaker launched a new counterfactual view [Horwich]
6882 Counterfactuals presume a false antecedent [Mautner]
6884 If it had been (or were) p, then q [Mautner]
6886 Counterfactuals are valid rather than true [Mautner]
6885 Counterfactuals are possible world facts [Mautner]
6883 Counterfactuals are logical inferences [Mautner]
14624 Counterfactuals transmit possibility [Williamson]
16249 The antecedent redescribes a moment [Maudlin]
14417 Counterfactuals have no truthmakers [Merricks]
21663 Counterfactuals are for learning and planning [Hofweber]
19503 Improbabilities occur in nearby worlds [Pritchard, D]
14379 Counterfactuals focus on antecedent powers [Jacobs]

C. Sources of Modality

1. Sources of Necessity

general views on what gives rise to necessity

4822 Divine nature makes everything necessary [Spinoza]
6181 Empirical propositions can't show necessity [Kant]
4192 Necessity is from causation and isn't absolute [Schopenhauer]
4743 Truth-makers necessitate their truth [Armstrong]
12687 Metaphysical necessity rests on essence [Ellis]
16984 Possible worlds don't show modal nature [Kripke]
3867 De re necessity depends on the world [Newton-Smith]
14629 The source of necessity is a potential regress [Blackburn]
14529 Is the basis of necessity itself necessary? [Blackburn]
12187 Objectual or non-objectual modal realism? [McFetridge]
13374 Modality needs object, properties, relations [Jubien]
13391 Modality is relations among properties [Jubien]
11166 Is the necessity always in the subject? [Fine, K]
9216 Each area has its own source of necessity [Fine, K]
14530 There exists semantic necessity in language [Fine, K]
17273 Each basic modality has its own explanation [Fine, K]
17289 All necessities are grounded in natures [Fine, K]
14531 Necessity is a special counterfactual case [Williamson]
12432 Do necessity or contingency explain necessity? [Hale]
12434 What needs explaining about necessity? [Hale]
12435 Explain necessity by truth, not by necessity [Hale]
19282 Modal facts don't depend on non-modal facts [Hale]
15030 We decide what is necessary [Sider]
15031 English modals are totally contextual [Sider]
14101 Necessity based on laws, as well as essences? [Rosen]
15103 Necessity could rest on contingency [Cameron]
14372 Possible worlds can't ground modality [Jacobs]
14549 Are truthmakers sources of necessity? [Mumford/Anjum]

2. Necessity as Primitive

necessities are self-justifying or self-evident

74 Even God can't undo what is done [Agathon]
12732 Some necessary truths are brute [Leibniz]
16438 Necessity and possibility are primitives [Stalnaker]

3. Necessity by Convention

necessity comes from linguistic conventions

18726 Necessities rest on arbitrary language rules [Wittgenstein]
15233 Conceptual necessary depends on the natural [Harré/Madden]
15242 Conventional necessities can reflect nature [Harré/Madden]
13973 Many modalities are not linguistic [Soames]
12433 Can necessity rest on contingent conventions? [Hale]
15027 Necessity 'by convention' sounds contingent! [Sider]
15028 Necessary a posteriori isn't conventional [Sider]

15032 A posteriori necessity is part analytic [Sidelle]
15179 Empirical necessity is facts plus conventions [Sidelle]
6582 Convention needs a non-conventional basis [Fogelin]
14478 Modality is analytic, linguistic, non-intrinsic [Thomasson]

4. Necessity from Concepts

necessity based on relations of concepts

18796 Necessity fits general experience conditions [Kant]
22018 Necessity arises from assertion and negation [Fichte]
15216 Concepts as convention, or reflecting nature? [Harré/Madden]
15235 Nominal essence can give conceptual necessity [Harré/Madden]
16423 We just conceive metaphysical possibilities [Stalnaker]
16422 Concepts are irrelevant to necessities [Stalnaker]
12028 De re necessity is conceptual [Forbes, G]
13810 De dicto necessity rests on properties [Forbes, G]
11169 Concepts generate their own necessities [Fine, K]
15087 All concepts support conceptual necessities [Hale]
12436 Concepts don't explain necessities [Hale]
15033 Our concept fixes what is necessary [Sider]

5. Modality from Actuality

all modal facts are grounded in the actual facts

3013 Necessity rules everything [Thales]
12978 A perfect idea reveals possibility [Leibniz]
5483 Essentialist are modal realists [Ellis]
16436 Modality is central to actuality [Stalnaker]
17572 Actuality proves possibility - unexplained [Inwagen]
12186 Modal realism: modality is factual [McFetridge]
6080 Modality is how objects bind to properties [McGinn]
14689 Modality doesn't rest on the actual world [Salmon, N]
11108 Other worlds don't fix our possibilities [Jubien]
11111 Modal truths are facts of this world [Jubien]
11118 Modality is actual but abstract [Jubien]
10745 Science has many modal commitments [Oliver]
15025 Actuality contains nothing modal [Sider]
12468 Possibilities must start in actuality [Pruss]
12466 Modality resides in actual properties [Jacobs]

6. Necessity from Essence

necessity comes from the essence of actual things

12612 The simple causes necessities [Aristotle]
15108 Necessities rest on essences [Aristotle]
17182 Necessity depends on essence or cause [Spinoza]
13570 Individual and kind essence necessities [Ellis]
5447 Essences make metaphysical necessities true [Ellis]
11162 Necessary features may not be essential [Fine, K]
11168 Metaphysical necessity from all natures [Fine, K]
15070 Naturally human, so necessarily human [Fine, K]
18502 Has reality a nature, founding deep necessity? [Heil]
5449 Essentialism is belief in de re necessity [Mautner]
16543 Truths of essence are metaphysically necessary [Lowe]
16544 Metaphysical necessity is grounded in essence [Lowe]
19276 Explain necessary existence be essence? [Hale]
19293 Essentialism explains necessity, not reduces [Hale]
19294 What necessitates an existence? [Hale]
14371 Define necessity by counterfactuals and powers [Jacobs]

D. Knowledge of Modality

1. A Priori Necessary

knowing what must be, just through thought

2301 We know a priori that deeds cannot be undone [Descartes]
12553 Ideas contain necessary relations [Locke]
19432 Intelligible truth is a priori [Leibniz]
17079 The understanding is the source of necessity [Leibniz]
2112 Truth is analytic necessity or contingent fact [Leibniz]
14710 Necessity is apriori; apriori is necessary [Kant]
16256 Metaphysics is necessary, so a priori [Kant]
5524 Maths is necessary, so it must be a priori [Kant]
9169 Necessary in fact, but contingent to us? [Putnam]
15101 Drop a priori, and causal becomes key [Shoemaker]
4728 Necessary and a priori are separate [Kripke]
16990 Two reasons for A priori = Necessary [Kripke]
15228 Necessity and apriori are quite separate [Harré/Madden]
2526 Weak imagination often suggests necessity [Dennett]
12428 Many necessities are inexpressible [Kitcher]
20476 If necessity is a priori, so is contingency [Casullo]
13956 Are there a priori insights into necessity? [Chalmers]
21621 Metaphysics necessity doesn't imply a priori [Williamson]

9598 Modal thought is part of normal thought [Williamson]
4719 Maybe a priori logic/geometry are relative? [O'Grady]

2. A Priori Contingent

knowing what happens to be, just through thought

12736 Knowing God's choices: a priori contingent [Leibniz]
13159 Only God sees contingent truths a priori [Leibniz]
9386 Stick a meter long is contingent a priori [Kripke]
9385 Designation gives a priori contingent truths [Kripke]
12429 Self-knowledge is a priori non-necessary [Kitcher]
17703 Light in straight lines is contingent a priori [Mares]

3. A Posteriori Necessary

knowing what has to be, by means of experience

8856 Quine said abstracta are known a posteriori [Quine]
2796 Necessity can only be known empirically [Quine]
5476 Natural laws are necessary a posteriori [Ellis]
2408 Some necessity is only knowable empirically [Kripke]
4960 Identities of names are a posteriori necessary [Kripke]
4966 Theoretical identity is necessary a posteriori [Kripke]
9174 Necessities about tables are not a priori [Kripke]
14631 How to demonstrate necessity a posteriori? [Jackson]
16421 2D semantics splits a posteriori necessities [Stalnaker]
15171 Necessary a posteriori: of essence or identity [Sidelle]

4. Conceivable as Possible

using imagination to assess what is possible

a. Conceivable as possible

22149 Use reality to assess possibility [Suárez]
4818 Ignorant people think any change is possible [Spinoza]
20310 Bad imagining lacks the contrary evidence [Spinoza]
5819 Conceivability is no proof of possibility [Putnam]
5478 Imagination tests known possibilities [Ellis]
15764 Is 'conceivable' compatible, or irrefutable? [Shoemaker]
15098 Experience supports imagination as useful [Shoemaker]
15100 Imagination reveals conceptual possibility [Shoemaker]
13967 Kripke split conceivable from possible [Soames]
13970 Combine the conceivable with the actual [Kripke]
14659 If we imagine being beetles, it's possible [Plantinga]
16522 A non-human Caesar seems inconceivable [Wiggins]
13963 Logical possibility is ideally conceivable [Chalmers]
16473 We can conceive modality a priori [Chalmers]
19258 Possible from Earth, or from some world? [Chalmers]
16536 Causal counterfactuals for metaphysics? [Lowe]
9596 Imagination is essential to modal thought [Williamson]
18853 Proper conceivability is to omniscient minds [Rosen]
15167 Empiricists use imagination for modality [Sidelle]
15177 Contradiction limits possible and imaginable [Sidelle]
9505 Possibility is no longer seen as imaginability [Bird]
14606 Ideal conceivability shows the possible [Schaffer, J]
16978 Conceivability is coherence, hence possibility [Tahko]
19267 Conceivable as possible needs filling out [Vaidya]
19440 Deep conceivability is needed [Vaidya]

b. Conceivable but impossible

3642 Properties aren't non-essential if doubtful [Arnauld]
16582 Imagine it happen - and how it can happen [Hobbes]
11958 Conceiving impossibilities is easy [Reid]
8562 We can conceive the impossible [Shoemaker]
15252 We can conceive the opposite of necessities! [Harré/Madden]
9660 The impossible can be vaguely imagined [Lewis]
2407 Imagining non-identity doesn't prove it [Chalmers]
3106 Necessity depends too much on conceivability [Segal]
10652 Pure fantasy doesn't indicate possibility [Varzi]
14714 Two conceivable possibilities contradict? [Schroeter]

c. Possible but inconceivable

14039 Up equals down is inconceivable [Epicurus]
13172 Unimaginable things may exist [Leibniz]
3802 Unimaginable doesn't mean impossible [Dennett]
3903 Something may be possible but inconceivable [Scruton]
17958 Just epistemic, not metaphysical possibility? [Vetter]
19268 Inconceivable as failure, or incoherence? [Vaidya]

E. Possible worlds

1. Possible Worlds

existence of worlds consisting of possibilities

a. Possible worlds

15883 God's possibilities gradually narrow [Leibniz]
18822 Worlds are class of compatible monads [Leibniz]

7837 Possible worlds were to accommodate evil [Leibniz]
19402 Actuality is the richest of the possibles [Leibniz]
19434 A world containing super-dogs? [Leibniz]
5400 Two and two are four in any possible world [Russell]
14460 True in all worlds is logical necessity [Russell]
11183 Possible worlds help sort properties [Marcus (Barcan)]
16957 Possible worlds include relative possibilities [Dummett]
4943 We can drop possible worlds for modal talk [Kripke]
11984 Possibilities concern alternative actuals [Plantinga]
14662 Possible worlds offer extensive clarifications [Plantinga]
4899 Possible worlds help modality not epistemology [Perry]
16397 Possible worlds describe ways to be true [Stalnaker]
16399 Possible worlds need possibilities [Stalnaker]
16398 Worlds take the controversy from modality [Stalnaker]
16429 Centred worlds have an individual at a time [Stalnaker]
9669 Possibilia are in worlds, not free-floating [Lewis]
7691 Consistent states & properties make actuality [Jacquette]
10266 Mythical possibilities give correct logic? [Shapiro]
4207 Possible worlds replace modal operators? [Lowe]
19279 How do possible worlds support modalities? [Hale]
10983 Our semantics entails possible worlds [Read]
7792 Worlds have access to worlds they generate [Girle]
5734 Necessity & counterfactuals aren't primitives [Melia]
5742 Modals can be quantifiers in possible worlds [Melia]
5743 Without possible worlds logic is empty [Melia]
5749 Possible worlds could be real in several ways [Melia]
18745 Models are possible states of affairs [Horsten/Pettigrew]
18747 A 'spheres model' addresses counterfactuals [Horsten/Pettigrew]
17956 Natures should fix closeness of worlds [Vetter]

b. Impossible worlds

16133 Fictional worlds can be contradictory [Lewis]
16132 It is contradictory to report contradictions! [Lewis]
6079 Only possible worlds can explain 'possible' [McGinn]
14674 Impossible worlds are ways for things to be [Salmon, N]
14682 Denial of impossible worlds is confused [Salmon, N]
14687 How might have been, or ways to be? [Salmon, N]
13749 Impossible worlds need dialetheism? [Schaffer, J]
18748 Epistemic logic introduced impossible worlds [Horsten/Pettigrew]

c. Possible worlds realism

15472 Truthmaking worlds must really exist [Martin, CB]
5482 Real possible worlds give truth for modals [Ellis]
16959 In S5 worlds are equal - and hence real? [Dummett]
12255 Are all possibilities really actual? [Oderberg]
9219 Lewis's worlds are like Quine's sets [Lewis]
15022 Real worlds are part of actuality [Sider]
10469 A world is a maximal mereological sum [Lewis]
16283 All worlds are actual, relative to themselves [Lewis]
12008 We can't separate worlds from truths [Forbes, G]
12009 How can we know possible worlds? [Forbes, G]
4586 Possible worlds must involve an ontology [Heil]
10982 How do we know real possible worlds? [Read]
12465 Concrete worlds are at least evidence [Jacobs]

d. Possible worlds actualism

16376 The possible is general, the particular actual [Peirce]
11003 Armstrong's actualism is the best version [Armstrong]
18383 Possibilities are propositions, not worlds [Plantinga]
16472 Plantinga fills actuality with possibilia [Stalnaker]
16433 Possible individuals in actualism? [Stalnaker]
11869 Worlds rest on object-possibilities [Wiggins]
15790 To know worlds, know possibilia first [Lycan]
15791 How to group possibilia into worlds? [Lycan]
18415 The actual world is just your world [Lewis]
16441 Sets as properties blocks actualism [Lewis]
16282 Ersatz: actuality, and abstract possibilities [Lewis]
10996 Reductionist, or moderate realist actualism [Read]
16188 No facts at all about non-existent things? [Simchen]

e. Against possible worlds

13589 Possible worlds and essence are circular [Quine]
18388 Necessities are prior to the possible worlds [Armstrong]
4950 Possible worlds are useful but misleading [Kripke]
6988 Maths is a problem for possible worlds [Jackson]
14683 Possible worlds can't define modality [Salmon, N]
11105 How many 'possible worlds' are there? [Jubien]
11106 Could existence happen to be necessary? [Jubien]
11109 If other worlds exist, they are actual [Jubien]

11107 This is the only world - so we're necessary? [Jubien]
 11112 Possible worlds don't explain necessity [Jubien]
 11113 Necessity explains worlds, not vice versa [Jubien]
 13389 Possible worlds: just infatuation with logic [Jubien]
 13390 Contingent worlds can't sum to a necessity [Jubien]
 9220 Lewis's possible worlds are circular [Shalkowski]
 18496 Fictional worlds can make modals true [Heil]
 8320 Do possible worlds contain possible worlds? [Lowe]
 16538 Base necessity on essence, not possible worlds [Lowe]
 12234 Possible worlds realism is circular [Oderberg]
 10406 Will possible worlds reduce to properties? [Swoyer]
 19299 Worlds relay on classical bivalence [Hale]
 12464 Stories don't cause real possibilities [Jacobs]
 12469 No insight in possible worlds semantics [Jacobs]
 18746 Models need too many possible worlds? [Horsten/Pettigrew]
 18750 Possible worlds can't handle everything! [Horsten/Pettigrew]
 12203 Possible worlds are too big for us [Rumfitt]
 18821 Possibilities are like partial worlds [Rumfitt]

2. Nature of Possible Worlds

how we should understand a possible world

a. Nature of possible worlds

15786 Worlds are ideology, not ontology [Hintikka]
 16992 We don't study worlds, we specify them [Kripke]
 16983 Worlds involve abstract fictions [Kripke]
 11980 Worlds are possible states of affairs [Plantinga]
 6975 There are five theories of possible worlds [Jackson]
 4898 Possible world: linguistic or real or abstract [Perry]
 14507 Worlds as qualities, or identities too? [Adams,RM]
 14285 Worlds embody some hypothetical beliefs [Stalnaker]
 15793 Ways things might have been - basic [Stalnaker]
 16396 Possible worlds are just methodological [Stalnaker]
 16437 Possible worlds are properties [Stalnaker]
 16444 Worlds regiment rather than reduce modality [Stalnaker]
 16445 Worlds are cells in logical space [Stalnaker]
 16284 Worlds as linguistic, models, or primitive? [Lewis]
 13968 Possible worlds are maximal possibilities [Soames]
 14672 Worlds are total ways thing might have been [Salmon,N]
 14675 Worlds are maximal, not consistent [Salmon,N]
 15795 Not enough mental events to make worlds [Lycan]
 15796 Worlds are composed on intensional objects [Lycan]
 12007 Possible worlds are points of logical space [Forbes,G]
 7688 The actual world is consistent combined states [Jacquette]
 9213 Definitions of possible worlds include actual [Fine,K]
 15069 Worlds are just the possible outcomes [Fine,K]
 15068 Worlds are totalities, like the actual one [Fine,K]
 10466 Possible worlds sets of possible tropes? [Bacon,John]
 8963 There are four theories of possible worlds [Hoffman/Rosenkrantz]
 14189 'Modal realists', 'actualists', 'ersatzists' [Paul,LA]
 18872 There are no distinct by indiscernible worlds [Cameron]
 14002 Two identical abstract worlds are one world [Markosian]
 15432 Are worlds structural universals? [Forrest]

b. Worlds as fictions

11964 Possible worlds are world-stories [Adams,RM]
 16285 World is a complete, consistent novel [Jeffrey]
 11850 Stories may be impossible [Wiggins]
 16286 Linguistic world must uniquely name everything [Lewis]
 16287 Maximal consistency for worlds is modal [Lewis]
 9662 Three problems with linguistic possible worlds [Lewis]
 19493 Pretend each possibility has a world [Yablo]
 5751 A possible world implies true propositions [Melia]

c. Worlds as propositions

7690 Separating 'exists' and 'actual' seems odd [Jacquette]
 14673 Worlds and propositions mustn't be circular [Salmon,N]
 15794 Worlds as sentences is circular? [Lycan]
 7695 Are remote proposition-structures worlds? [Jacquette]
 7694 The actual world is maximally consistent [Jacquette]
 10981 Possible world fix domain truth-values [Read]
 19011 Which propositions are really possible? [Vetter]

3. Transworld Objects

what are the objects of talk about possibilities?

a. Transworld identity

17208 Changing species would destroy a horse [Spinoza]
 12904 Variants of me are not me [Leibniz]
 11981 A different life means a different person [Leibniz]
 11027 An objects possibilities must also be known [Wittgenstein]

12443 Identity for unactualized possibles? [Quine]
 9203 We cannot quantify in modal contexts [Quine]
 11965 Could Adam and Noah gradually swap? [Chisholm]
 16993 We stipulate transworld identity [Kripke]
 16998 Transworld identification is unproblematic [Kripke]
 17001 Don't identify across worlds by essence [Kripke]
 4952 Identification across worlds needs no property [Kripke]
 14651 What S could have been, and could have become? [Plantinga]
 11982 If possible Socrates differs he isn't Socrates [Plantinga]
 11983 We needn't recognise possible Socrates [Plantinga]
 11985 Unique individuals have necessary properties [Plantinga]
 11971 Bare particulars solve transworld identity [Kaplan]
 12765 Bizarre identities are pointless [Stalnaker]
 14072 Possible worlds identity needs a sortal [Gibbard]
 14078 Only concepts have transworld identity [Gibbard]
 12011 What are a thing's limits of possibility? [Forbes,G]
 12016 Individual essences solve transworld identity [Forbes,G]
 15377 Descriptions pick out variable objects [Fitting]
 13725 Pick by essential or contingent properties? [Fitting/Mendelsohn]
 13731 Objects are bundles of possibilities [Fitting/Mendelsohn]
 13081 Only abstracta have transworld identity? [Cover/O'Leary-Hawthor]
 12235 Essential identity is eviscerated essentialism [Oderberg]
 13717 De dicto has no transworld identity problem [Sider]
 15176 Modal identities are also conventional [Sidelle]
 12889 The limits of variation depend on the kind [Simons]
 11887 Individual essence avoids bare identity [Mackie,P]

b. Rigid designation

13588 Rigid designators pick objects by essence [Quine]
 11187 Possible world names are neutral pegs [Marcus (Barcan)]
 7761 Rigid? Try 'N might not have been N' [Kripke]
 7693 Identity must be decided, not discovered [Kripke]
 5821 Rigid designators are indexicals [Kripke]
 14068 Rigid clay and statue come apart [Gibbard]
 10436 Non-existents can have rigid reference [Kripke]
 4953 Begin with actual objects, not possible worlds [Kripke]
 4961 Elizabeth II necessarily originated as she did [Kripke]
 9172 Rigid designation fixes possible references [Kripke]
 9173 Our Nixon couldn't have been a different man [Kripke]
 17003 'Dthat' usefull rigidifies a description [Kripke]
 11891 Transworld identity can't change [Plantinga]
 11881 Empty designators have meaning [Evans]
 12138 Identity precedes rigid designation [Brody]
 16408 Rigidity needs an individual in all worlds [Stalnaker]
 14079 Kripke needs intuitions about essences [Gibbard]
 11979 Part of Humphrey can win the election [Lewis]
 15530 Logically determinate names stay fixed [Lewis]
 12237 Rigid designation assumes essentialism [Oderberg]
 15174 Rigid terms just need a convention [Sidelle]
 15183 'Dthat' rigidifies a singular term [Sidelle]

c. Counterparts

13080 Leibniz believes in counterparts [Leibniz]
 9176 This table doesn't have counterparts [Kripke]
 9221 We don't care about our counterparts [Kripke]
 11986 No counterpart has identity-with-Socrates [Plantinga]
 11987 I couldn't have been someone else! [Plantinga]
 11972 Essence is a transworld heir line [Kaplan]
 11973 Someone with no counterpart, or several? [Kaplan]
 16409 I defend actualist counterpart theory [Stalnaker]
 16411 I can't be in more than one possible world [Stalnaker]
 16412 Counterpart theory is extreme essentialism [Stalnaker]
 16454 The choice of counterpart fixes modality [Stalnaker]
 16994 Who cares what happens to counterparts? [Kripke]
 11974 A counterpart is the unique ressembler [Lewis]
 11975 Counterparts must resemble closely [Lewis]
 11977 Essence is shared counterpart attributes [Lewis]
 14404 Counterparts are relative to sortals [Lewis]
 5440 Counterparts are close and closest resemblers [Lewis]
 5441 Why does my counterpart matter to me? [Mautner]
 16291 Humphrey is a mereological sum of beings [Lewis]
 17579 Counterparts reduce to similarity problems [Inwagen]
 11110 Similar people aren't the same people [Jubien]
 12004 Counterparts ruin the logic of identity [Forbes,G]
 13726 Counterparts undermine equality in logic [Fitting/Mendelsohn]
 16239 Picking counterparts needs sortals [Hawley]
 11000 Concrete worlds require counterparts [Read]
 14763 A counterpart relation varies with contexts [Sider]

6133 My counterpart's happiness is irrelevant to me [Merricks]
 14402 'Fido may be black' lacks actual truthmakers [Merricks]
 11890 Counterparts may be essential [Mackie,P]
 11892 Counterparts are under a relation [Mackie,P]
 11893 Possibilities must link to actuality [Mackie,P]

d. Haecceitism

13085 Leibniz is some form of haecceitist [Leibniz]
 12869 Two objects may only differ in being different [Wittgenstein]
 16451 Does all thinsness reduce to suchness? [Adams,RM]
 11901 Haecceity and essence linked? [Adams,RM]
 14512 Transworld identities are primitive [Adams,RM]
 9668 'Haecceitism' is shared or distinct thinsness [Kaplan]
 11990 'Haecceitism' is belief in a thing's thinsness [Kaplan]
 11991 Modal reference needs haecceitism [Kaplan]
 16450 Anti-haecceitism: individual is just qualities [Stalnaker]
 11903 Just ignore bizarre identity shift? [Lewis]
 15129 Haecceitism: identity may be hidden [Lewis]
 9670 Haecceitism implies you could be a poached egg [Lewis]
 12021 Haecceitism offers primitive thinsness [Forbes,G]
 12029 Our intuitions support thinsnesses [Forbes,G]
 9491 Haecceitism is qualityless identity [Bird]
 11884 Haecceities don't entail haecceitism [Mackie,P]

e. Possible Objects

17209 Contingency is essence not fixing existence [Spinoza]
 5039 What now exists can't be necessary [Leibniz]
 16986 'There might have been unicorns' is false [Kripke]
 17590 A merely possible object clearly isn't there [Inwagen]
 17591 Possible objects are properties or haecceities [Inwagen]
 15142 Counting possible objects means Barcan [Williamson]
 18925 Possibilia must exist in some form [Williamson]
 13719 Barcan: possibly ghosts, but no existence? [Sider]
 19037 Are there very remote possible objects? [Vetter]

11. Knowledge Aims

A. Knowledge

1. Knowledge

situation of holding a set of reliable true beliefs

6328 Know, but believe you do not know [Lao Tzu]
 6323 Learning is energetic; the Way is not [Lao Tzu]
 16120 We must know how to use our knowledge [Plato]
 2133 Knowledge is of permanent natures [Plato]
 2080 Where logos is possible, so is knowledge [Plato]
 5991 Knowledge is of causes [Aristotle]
 12072 Aristotelian knowledge is explanatory [Aristotle]
 12073 Episteme gives cause and explanation [Aristotle]
 12378 The reason why is the key to knowledge [Aristotle]
 547 Those who really know can teach [Aristotle]
 7289 Do nothing; know nothing; be empty [Chuang Tzu]
 21397 Knowledge is a fully tightened grip [Zeno of Citium]
 20783 Knowledge is an unshakable grasp [Stoic school]
 9089 Knowledge is a quality of the soul [William of Ockham]
 9091 Knowledge of answers, or full reasons [William of Ockham]
 5640 Perception, then principles, then intuition [Spinoza]
 12544 Ideas outstrip our knowledge [Locke]
 19424 Knowledge: clear, distinct, adequate, intuitive [Leibniz]
 19397 Perfect knowledge explains and predicts [Leibniz]
 19757 Desire for pleasure motivates reason [Rousseau]
 20944 Knowledge has three stages [Kant]
 21957 'Transcendental' concerns how we know [Kant]
 5617 Knowers go from intuition to concept to idea [Kant]
 20126 The strength of knowledge is a cultural matter [Nietzsche]
 4537 Is there knowledge? What IS knowledge? [Nietzsche]
 5431 Knowledge blurs into probable opinion [Russell]
 16482 Words force our knowledge to be general [Russell]
 6430 Epistemology must cover animals [Russell]
 15037 Why does knowledge arrive in bursts? [Foucault]
 8878 Supermarket doors 'know' people are coming [Sosa]
 8888 The concept of knowledge is best avoided [Bonjour]
 3897 Epistemology is about justification of belief [Scruton]
 6346 Foundations, coherence, probability, reliable [Pollock/Cruz]
 3756 Knowledge comes from reason & experience [Bernecker/Dretske]
 21627 Inexact knowledge includes margins of error [Williamson]
 19566 Epistemology is not just about knowledge [Kvanvig]
 19712 'Animal' and 'reflective' knowledge? [Vahid]

2. Understanding

knowledge of sources, causes and explanations

16126 Experts know the whole via the parts [Plato]
12364 Understanding sees explanation and necessity [Aristotle]
12366 Understanding is knowing explanations [Aristotle]
12370 Immediate understanding is indemonstrable [Aristotle]
22170 Understanding grasps essential natures [Aquinas]
17211 Understanding is the sole aim of reason [Spinoza]
19332 Divine understanding covers all possibilities [Leibniz]
12960 Understanding is seeing the necessities [Leibniz]
12998 Understanding grasps concordance of ideas [Leibniz]
15627 Understanding is of the finite conditioned [Kant]
16898 Understanding is basically singular [Kant]
5573 Reason is the faculty of rules or principles [Kant]
4190 All understanding is of causation [Schopenhauer]
19089 We understand objects by their consequences [Peirce]
17623 Logical structure reveals a thought [Frege]
16885 Inferential connections give understanding [Frege]
15578 Understanding must precede propositions [Heidegger]
18712 Understanding is translation: action or symbols [Wittgenstein]
13047 Understanding is knowing 'why' [Salmon]
13065 Understanding is a very vague concept [Salmon]
17944 'Episteme' really means 'understanding' [Nehamas]
16814 Understanding is just knowledge of causes [Lipton]
9325 Start with understanding, not knowledge? [Gulick]
20188 Epistemology is now too atomistic [Zagzebski]
20223 Avoid atomism in epistemology [Zagzebski]
18810 Understanding implies necessity in the logic [Smiley]
16562 To understand, show the bottom level [Machamer/Darden/Craver]
15707 There are six types of understanding [Gelman]
19542 Understanding must involve knowledge [Dougherty/Rysiew]
19543 What knowledge is needed for understanding? [Dougherty/Rysiew]
19261 Understanding is seeing coherent relationships [Kvanvig]
19690 'Grasping' structure involves possibilities [Grimm]
19691 Maybe understanding can be lucky [Grimm]
19692 Saying why may only need weak understanding [Grimm]
14365 Understanding is grasping the explanation [Strevens]
14368 We understand 'why', as well as 'that' [Strevens]
14369 Understanding is distinctive in four ways [Strevens]
18831 To grasp A, also grasp not-A? [Rumfitt]
19265 Can we understand, but not realise it? [Vaidya]

3. Value of Knowledge

importance and need for knowledge in humans

20219 Reasons give true opinions their value [Plato]
20184 The only real evil is loss of knowledge [Plato]
20185 Wisdom and knowledge are paramount [Plato]
21479 Knowledge is not power! [Schopenhauer]
20258 People treat knowledge as a possession [Nietzsche]
20217 Knowledge is more valuable than truth [Zagzebski]

4. Belief

committed mental state aiming at truth (Gk. doxa)

a. Beliefs

3605 We can believe without knowing we believe [Descartes]
2209 Belief is a stronger feeling than imagination [Hume]
5634 Subjective and objective sufficiency are key [Kant]
14875 Belief matters more than knowledge [Nietzsche]
5937 Grounds and commitment make opinions good [Ross]
13592 Beliefs can be ascribed to machines [Quine]
5309 Beliefs are survival mechanisms [Wilson,EO]
3743 Beliefs must be expressed for thought [O'Connor]
3748 Languageless belief is particular and present [O'Connor]
11145 Believers must understand error [Davidson]
5806 Belief is the power of metarepresentation [Dretske]
3872 Identifying beliefs involves assessing them [Newton-Smith]
16392 Belief is self-ascribing a content property [Lewis]
12899 The timid student has knowledge without belief [Lewis]
8808 Involuntary beliefs can still be evaluated [Feldman/Conee]
12583 Belief content is their normal circumstances [Papineau]
3591 Beliefs cannot be counted [Williams,M]
12582 Beliefs intrinsically aim at correctness [Millikan]
4096 Maybe beliefs are not conscious [Crane]
4097 There are de re and de dicto beliefs [Crane]
2986 Belief is our central propositional attitude [Lyons]
2390 Beliefs are mainly explanations of behaviour [Chalmers]
19743 Notebooks can have exactly the role of memory [Clark/Chalmers]

4762 Beliefs may motivate us to action [Engel]
10337 Social knowledge doesn't need belief [Kusch]
19696 Reasons for which, why, and to believe [Neta]
19697 Basing relations support and explain beliefs [Neta]

b. Elements of beliefs

20868 Opinion lacks grounds, or strength [Stoic school]
2208 Belief is feeling attached to conjoined ideas [Hume]
2207 The mind can't choose what it believes [Hume]
7660 Beliefs are rules for action that satisfy us [Peirce]
5426 Belief relates mind to several external things [Russell]
5780 Beliefs have contents, success and character [Russell]
8806 Belief and truth are linked concepts [Davidson]
12149 Indexicals tricky in beliefs [Perry]
6171 Beliefs involve behaviour and truth [McGinn]
4266 Beliefs can recognise, expect and surprise [Scruton]

c. Aim of beliefs

2050 We cannot knowingly believe a falsehood [Plato]
4391 Opinions are praised for their truth [Aristotle]
1685 Opinion implies possibility of being otherwise [Aristotle]
14050 Dissolve fears, by understanding them [Epicurus]
9100 We only accept what seems true [William of Ockham]
6941 Firm beliefs satisfy us, even if false [Peirce]
6940 The feeling of belief leads to action [Peirce]
6943 Doubt, not questions, stimulates beliefs [Peirce]
6942 'My belief is true' is a tautology [Peirce]
14781 Beliefs determine our fancy and actions [Peirce]
19223 Full belief for crises; opinion for trivia [Peirce]
4485 Every belief is a considering-something-true [Nietzsche]
6672 You might believe falsehoods, but I can't [Moore,GE]
3212 Beliefs are maps by which we steer [Ramsey]
6600 Belief and fear are similar [Wittgenstein]
3816 Proposition is content of belief, not object [Searle]
3833 A belief is a commitment to truth [Searle]
3837 Lies prove belief is commitment to truth [Searle]
19308 Illogically, we long to believe truths [Harman]
3570 Knowledge is belief that tracks truth [Nozick]
6783 Empirical acceptance is better than belief [Fraassen]
4760 Mere belief is botched knowledge [Williamson]
4754 Beliefs fit world, world should fit desires [Engel]
19525 Wildly believe, in the hopes of getting truth? [Conee/Feldman]
15372 We believe non-true conditionals? [Horsten]

d. Cause of beliefs

2076 Belief can't exist if it has no object [Plato]
20190 The will, not intellect, produces beliefs [Descartes]
12574 We can't reject obvious knowledge [Locke]
20189 We can't help the feeling of belief [Hume]
3661 We can't help some of our beliefs [Hume]
2213 Beliefs build by associating experiences [Hume]
20945 Belief is non-rational, like taste and smell [Hamann]
5366 We have an 'instinctive belief' in reality [Russell]
12651 We infer some beliefs when needed [Fodor]
2715 There are four categories of belief [Audi,R]
20191 Voluntariness of beliefs comes in degrees [Zagzebski]
6635 Beliefs can't just be caused by the world [Lowe]
4763 Should we only believe on basis of evidence? [Engel]

e. Belief holism

21801 Spinoza held a holistic view of belief [Spinoza]
18969 Counting beliefs depends on individuation [Quine]
6397 Concepts of belief come from a speech group [Davidson]
8867 Beliefs need background distinctions [Davidson]
3490 Beliefs only function as part of a network [Searle]
3491 Beliefs need a network and a background [Searle]
3100 Inference constantly reaffirms our beliefs [Harman]
2502 Beliefs can't be counted [Fodor]
2735 Could one have just a single belief? [Audi,R]

f. Animal beliefs

5801 Belief needs concepts and understanding [Dretske]
8818 Defeasible reasoning requires meta-thought [Pollock]
2970 Dogs have beliefs, and hence concepts [Lockwood]
4265 Belief implies both error and learning [Scruton]

5. Aiming at Truth

sole aim of knowledge is awareness of the truth

4421 Why is there a will to truth? [Nietzsche]
18974 Truth is the goodness of beliefs [James]
19569 We have a duty to believe the truth [Chisholm]

20222 Knowledge seeks quantity or quality [Zagzebski]
19568 Not all cognitive success involves truth [Kvanvig]

6. Knowing How

having a skill which may be inarticulate

546 Skill involves knowledge of causes [Aristotle]
544 Experience knows particulars, skill universals [Aristotle]
10950 Skill implies a prior mental state [Aristotle]
12628 Knowing that precedes knowing how [Fodor]
9326 Knowing-that is a richer kind of knowing-how [Gulick]
4093 Knowing how can also be propositional [Crane]
7630 The knowing how/that division is simplistic [Maurd]

7. Knowledge First

knowledge is a basic concept, not to be analysed

20799 A complete grasp is natural and true [Zeno of Citium]
7154 Self-criticism of knowledge is impossible [Nietzsche]
19512 Don't analyse knowledge; use it for analysis [Williamson]
19527 The evidence is itself knowledge [Williamson]
19528 Belief is an attempt to achieve knowledge [Williamson]
19529 Knowledge also explains justification [Williamson]
19530 Success is basic, not some neutral state [Williamson]
19531 Knowledge-first is externalist [Williamson]
19536 Your total evidence IS your knowledge [Williamson]
19541 Not knowledge, just truth or understanding? [Dougherty/Rysiew]

B. Certain Knowledge

1. Certainty

possibility or necessity of certainty in knowledge

389 There is no certainty in changing cosmology [Plato]
1673 Certain knowledge is rooted in principles [Aristotle]
22129 Self-evident, induction, awareness are certain [Duns Scotus]
9090 Knowledge is certain cognition of a truth [William of Ockham]
9807 Philosophy seeks the certainty of maths [Descartes]
1583 Descartes accepts uncertainty about values [Roochnik]
1585 Descartes models his rationality on maths [Roochnik]
1582 Insisting on certainty is opposed to 'logos' [Roochnik]
2256 Maybe total uncertainty is the only certainty [Descartes]
3657 Understanding, not senses, gives certainty [Descartes]
17193 Certainty is implicit in true ideas [Spinoza]
21863 Only certainty can reveal certainty [Spinoza]
17199 No one can be certain of a falsehood [Spinoza]
15995 The greatest certainty is of our own ideas [Locke]
12562 Certainty is only found in ideas [Locke]
15994 Knowledge requires certainty [Locke]
13006 Doubting a certainty is mad, or blameworthy [Leibniz]
21772 Certainty is closing the self/object gap [Hegel]
14858 Certainty implies truth and means of knowledge [Nietzsche]
4487 What is convincing may not be true [Nietzsche]
21516 Successful action needs certainty [Dewey]
9636 I aim for the certainty of mathematics [Hilbert]
5936 Knowledge is superior because it is certain [Ross]
5183 Only tautologies can be certain [Ayer]
2745 Unconfident people can know things [Dancy,J]
3582 Error is unavoidable, ruining foundations [Williams,M]
2736 We make certain things we already know [Audi,R]
6351 Reason is defeasible, not deductive [Pollock/Cruz]
6374 Believe everything, or believe nothing? [Pollock/Cruz]

2. Common Sense Certainty

'Moorean' certainty, that direct experience trumps any argument

1889 Reject arguments with absurd conclusions [Sext. Empiricus]
20147 Sceptical arguments can't match perception [Moore,GE]
6349 I prove a hand exists by holding it up [Moore,GE]
15245 Can reason or experience justify experience? [Harré/Madden]
19553 'I have a hand' needs a context of doubt [Hawthorne]
19505 There are three problems with Moore's claim [Pritchard,D]
13740 Truths more certain than any objection? [Schaffer,J]

3. Fallibilism

beliefs can count as knowledge even if they are not certain

12569 Sense knowledge is less certain knowledge [Locke]
19107 Inquiry rests on a bog, not bedrock [Peirce]
14768 Scientific infallibility is a joke [Peirce]
14770 Reason is inductive, so can't be certain [Peirce]
17637 Highly obvious beliefs are not infallible [Russell]
12897 Know P and allow not-P? Contradiction? [Lewis]
2755 Incorrigibility of senses is bad, not good [Dancy,J]
6898 All knowledge-claims are provisional [Mautner]

19701 Dogmatic or sceptical fallibilism? [Dougherty]
19700 Fallibility is in the reasons for knowledge [Dougherty]
19702 Don't say 'I know p, but it might be false'! [Dougherty]
19718 Infeasibility does not imply infallibility [Grundmann]

4. The Cogito

Descartes' claim that his own existence is self-evidently and necessary
451 Thinking implies existence [Parmenides]
2573 Our existence is obvious if we are aware [Aristotle]
3912 I must exist, even to be mistaken [Augustine]
3607 I think therefore I am [Descartes]
6929 We have replaced God with the human ego [Descartes]
3849 The Cogito is the basis of consciousness [Sartre]
2259 "I exist" is necessarily true when thought [Descartes]
2258 I must exist if I am being deceived [Descartes]
3160 Cogito is not a priori but transcendental [Rey]
2260 I am nothing but a thinking thing [Descartes]
3622 The Cogito is self-evident, not a syllogism [Descartes]
6914 Both God and I exist because thinkable [Descartes]
4641 The form 'I am; I exist' is not an argument [Descartes]
3658 My existence is certain even when doubting [Descartes]
5005 My non-existence is a contradiction [Descartes]
5006 'Thought' includes feeling [Descartes]
12564 The thing which doubts is also certain [Locke]
12905 Existence and self seem certain [Leibniz]
15611 Philosophy grows from consciousness [Hegel]
15636 The Cogito is the centre of modern philosophy [Hegel]
4165 The Cogito roots philosophy in the individual [Schopenhauer]
21220 Physical is doubtful, mental is sure [Husserl]
5359 Subjective things are the most certain [Russell]
21862 'I can' comes before 'I think' [Merleau-Ponty]
3828 The thinker is a self, not just a thing [Searle]
8221 The Cogito is beyond judgement [Deleuze/Guattari]
3881 He goes from conscious to self-conscious [Scruton]

5. Cogito Critique

objections to the necessary existence of a thinker
5360 The experiencing thing may change [Russell]
1117 The Cogito claims too much about the Self [Russell]
2870 'I think' contains heaps of unprovable ideas [Nietzsche]
1369 The Cogito presupposes that I exist [Ayer]
2873 Maybe I am caused by thoughts, not vice versa [Nietzsche]
5188 A thought doesn't imply a continuous self [Ayer]
3623 Thought and existence must be understood first [Mersenne]
3624 That I think doesn't prove I'm an intellect [Hobbes]
3120 I don't have to see myself as a thinker [Segal]
4526 Adding a 'thinker' is a grammatical custom [Nietzsche]
5579 Must other thought be just like mine? [Kant]
5580 My self is presupposed, not inferred [Kant]
5587 There is no a priori information about a self [Kant]
5588 I'm not an object, just because I am a subject [Kant]
13923 Can he know his existence before his essence? [Descartes]
6930 The ego is a doubtful abstraction [Feuerbach]
5638 The Cogito is contingent and first person [Spinoza]
19334 Do I know that my mind is distinct? [Leibniz]
12996 I know more than just 'I think' [Leibniz]
13003 'I am thinking' presupposes my existence [Leibniz]
5590 The Cogito is an identity not an inference [Kant]
7146 Body is more certain than mind [Nietzsche]
22159 Starting with 'I' misses the phenomena [Heidegger]
7114 The thinker doesn't say 'I think' [Sartre]
7112 The Cogito is a second-order concept [Sartre]
7119 Is the Cogito particular or general doubt? [Sartre]
19459 'I'm not thinking' is not a contradiction [Ayer]
19460 'I know I exist' may be meaningless [Ayer]
19461 I learn nothing from the Cogito [Ayer]
6619 'I' may be like 'it' in 'it is raining' [Lowe]
12407 Barman to Descartes:... [Sommers,W]
12399 There was a young student... [Sommers,W]

C. Knowing Reality

1. Perceptual Realism

commitment to the existence of a reality outside our minds
a. Naïve realism
3958 Perceptions fluctuate more than reality [Berkeley]
4758 Physics shows naïve realism false [Russell]
5677 Unperceived objects have all their properties [Dancy,J]

6485 Air near red objects is not red [Robinson,H]
3875 Presumably a sixth sense would enlarge reality [PG]

b. Direct realism

21337 Knowers hold the presence of what is known [Aquinas]
22130 Scotus defended direct 'intuitive cognition' [Duns Scotus]
3943 Existence isn't perceived, directly or not [Berkeley]
14866 The world could be as it appears [Nietzsche]
21537 We perceive objects, not 'presentations' [Russell]
5377 'Acquaintance' is direct awareness of things [Russell]
22160 Hammers become more real when used [Heidegger]
5678 Scientific direct realism - primary properties [Dancy,J]
5681 Direct realism can't explain perceptual error [Dancy,J]
6549 Greenness is a micro-property of objects [Lycan]
6643 We don't infer information, we perceive it [Lowe]
6355 Perceptual states can justify, without beliefs [Pollock/Cruz]
19526 Acquaintance has objects, not appearances [Williamson]
16374 Acquaintance to description is a continuum [Recanati]
8417 Defeasibility makes direct realism false [Galloway]

c. Representative realism

1871 Honey seems sweet but its essence is doubtful [Sext.Empiricus]
6526 Hume says imagination produces objects [Hume]
6510 Phenomena resemble reality abstractly [Russell]
5372 Objects do not have colours [Russell]
21580 Logical construction links data to matter [Russell]
5683 Four arguments support indirect realism [Dancy,J]
5682 Indirect realist say we know internal objects [Dancy,J]
6521 Phenomenal laws apply to reality [Robinson,H]
6509 Sense-data and objects share properties [Robinson,H]

2. Phenomenalism

reality is just actual and potential appearances
1549 Existence consists of perception [Protagoras]
2261 Reality may be unreliable, but not experiences [Descartes]
12739 Dreams are fine, if it is all coherent [Leibniz]
6722 My table's existence is possible perceptions [Berkeley]
5192 Berkely did not deny material things [Berkeley]
5174 Berkeley needs a phenomenalist view of self [Ayer]
3931 Objects are just sets of sensible qualities [Berkeley]
5601 Moon creatures are only possible experiences [Kant]
3583 Objects are permanent possible sensations [Mill]
18988 Behind the phenomena there is nothing [Wright,Ch]
6466 Logical constructions, not inferred entities [Russell]
6418 Phenomenalism won't explain causality [Russell]
4153 Is the world made of sense-data? [Wittgenstein]
20743 The appearances are the essence [Sartre]
6525 Explain 'table next door' as sense-data! [Robinson,H]
5170 Objects are actual and possible sensations [Ayer]
8824 Phenomenalism died in 1940 [Ayer]
2614 Phenomenalism makes objects logical constructs [Ayer]
18209 Phenomenalism can't express all objects [Quine]
8199 Reality without sentence is unintelligible [Dummett]
2778 Phenomenalists admit possible experiences [Dancy,J]
3592 Phenomenalism is a form of idealism [Williams,M]
2721 Subtract a book's properties and what is left? [Audi,R]
2722 Phenomenalist and sense-data reality differ [Audi,R]
6522 Theistic, sceptical or analytic phenomenalism [Robinson,H]
6359 Fallibilism makes phenomenalism redundant [Pollock/Cruz]
7301 To be is to be perceivable [Cardinal/Hayward/Jones]
7302 We can eliminate talk of physical objects [Cardinal/Hayward/Jones]
7303 Are parts of reality 'indeterminate'? [Cardinal/Hayward/Jones]
20963 A philosopher and his wife are out... [Sommers,W]

3. Idealism

reality exists entirely as ideas
a. Idealism
7898 Reality is just illusion of appearance [Anon (Dham)]
5958 The sun behind clouds is bright [Plutarch]
12742 Matter is unending, so minds are reality [Leibniz]
5509 For Leibniz there is only mind, not body [Leibniz]
7568 Leibnizian idealism says universe is mental [Leibniz]
22003 Non-sensory space-time must be ideal [Kant]
21456 Experienceability is not idealism [Gardner]
21446 If we vanish, time and space vanish [Kant]
22062 Thought concerns strivings of the self [Fichte]
21361 Without mind, no material things [Schopenhauer]
21923 'Will' is his basic, because he is an idealist [Lewis,PB]
4162 The world only exists as man's idea [Schopenhauer]

21922 We know reality through our bodies [Schopenhauer]
5373 Idealism says everything exists mentally [Russell]
5684 Idealists sometime deny objects entirely [Dancy,J]
4591 Idealists say appearance is reality [Heil]
8280 If space is just appearance, change can't be [Lowe]
22048 Idealism links reason to freedom [Pinkard]
6159 Mind/world separation gives bad idealism [Rowlands]

b. Transcendental idealism

22012 Both things and their causation are ideas [Henry of Ghent]
6910 Kant's idealism is based on empiricism [Kant]
6909 Objects fit understanding, not vice versa [Kant]
21440 Is Kantian experience like reality, or not? [Kant]
22006 Concepts of experience are created by us [Kant]
16923 There are bodies outside us [Kant]
21441 Transcendental is a prerequisite of experience [Kant]
21442 Knowing cognition a priori is 'transcendental' [Kant]
5568 We cannot know things in themselves [Kant]
5581 Bodies are just appearances of the senses [Kant]
21956 We only have representations, no reality [Kant]
22068 Poetry can connect the ideal to the real [Schlegel,F]
22015 The thing-in-itself is an empty dream [Fichte]
22064 Fichte's logic is much too narrow [Schlegel,F]
21973 Fichte believed in things-in-themselves [Fichte]
21914 Deduce experience from self-consciousness [Fichte]
21919 Object for a subject is just representation [Schopenhauer]
21913 Appearance and thing-in-itself are distinct [Schopenhauer]
6908 Everything exists through consciousness [Feuerbach]
21958 Appearances are mere representations [Moore,AW]
22049 Explain objectivity through subjectivity [Bowie]
19651 Transcendental idealism assumes a body [Meillassoux]

c. Empirical idealism

6723 Objects can only exist within minds [Berkeley]
6724 Perceiving spirit is the only substance [Berkeley]
6732 Unseens can exist in other minds [Berkeley]
1103 Berkeley misunderstood ideas and things [Russell]
6403 Reality is God, other minds and ideas [Berkeley]
3930 Material substance does not exist [Berkeley]
3936 Time is measured by changing ideas [Berkeley]
3939 I conceive a tree, but can't prove it exists [Berkeley]
3945 The concept of matter explains nothing [Berkeley]
3947 Perceived things are ideas, and hence mental [Berkeley]
2501 Berkeley confuses chairs with afterimages [Fodor]
12409 The philosopher Berkeley once said.. [Sommers,W]
12402 ..But if he's a student [Sommers,W]
12403 There once was a man... [Sommers,W]
12404 Dear Sir, Your astonishment's odd.. [Sommers,W]

d. Absolute idealism

21971 The subject originates unified reality [Kant]
22067 Poetry is universal self-consciousness [Novalis]
22032 Objectivity has to be subjective [Fichte]
20951 A conscious I, and a world of not-I [Fichte]
21964 Philosophy starts with the rational self [Fichte]
21968 Things only exist if we think them [Fichte]
21966 All knowledge is self-knowledge [Fichte]
21967 What is beyond consciousness is unknown [Fichte]
21969 Mental activity is the source of reality [Fichte]
21774 True idealism sees the world as ideas [Hegel]
8928 The Absolute is intuited, not understood [Hegel]
8929 In the Absolute everything is the same [Hegel]
8934 Being is Thought [Hegel]
20954 Absolute ideas are the end of contradiction [Hegel]
21972 Appearance and reality are one [Hegel]
22038 Idealism is unity of subjective and objective [Hegel]
22044 Hegel merely mapped concepts [Pinkard]
21464 Absolute is the primitive actualised concepts [Hegel]
21975 The absolute idea is being and total truth [Hegel]
21976 The absolute idea is the unity of all concepts [Hegel]
22084 Authentic thinking is reality [Hegel]
21925 The Absolute is self-conscious nature [Schelling]
22045 Metaphysics aims at the neutral Absolute [Schelling]
22074 Effective nature is grounded in freedom [Schelling]
22072 Freedom has an absolute status [Schelling]
19447 The Absolute is spirit 'and' nature [Feuerbach]
6404 Reality is a Mind that experiences itself [Bradley]
21343 The Absolute is a single pure substance [Bradley]
20950 Thought is structured like nature [Bowie]

22055 Judgements and choices are spontaneous [Bowie]
22054 Idealism aims to prevent oppositions [Bowie]
22056 Receptivity and spontaneity are linked [Bowie]
21911 Fichte, Hegel, Schelling: Absolute Idealism [Lewis,PB]
21912 Fichte, Schelling and Hegel rejected Kant [Lewis,PB]

4. Solipsism

only the contents of the thinker's mind exist
2257 My mind may create all my experiences [Descartes]
6932 Ideas and reason need a community [Feuerbach]
5362 Solipsism is not illogical [Russell]
2777 Relaxed solipsists include past and future [Dancy,J]
21227 The Cogito isolates the ego [Velarde-Mayol]
10357 Methodological Solipsism:one mind could do all [Kusch]

12. Knowledge Sources

A. A Priori Knowledge

1. Nature of the A Priori

nature of knowledge acquired by pure thought
11239 A priori truth is absent in Aristotle [Aristotle]
20784 Unaided intellect presents things [Stoic school]
9156 A priority is mental, not propositional [Burge]
7575 A priori is confined to possible experience [Kant]
12414 A priori is independent of experience [Kant]
9351 A priori is concept analysis, or speculation [Kant]
21476 A priori means it is never challenged [Schopenhauer]
9158 A priori knowledge must derive from principles [Frege]
8259 The a priori/a posteriori gap is still alive [Kripke]
16989 Stick to whether some person knows a priori [Kripke]
4947 A priori truths can be found by experience [Kripke]
6982 A priori arithmetic can be fallible [Jackson]
16892 Are truths a priori, or cognitions? [Burge]
9333 A priori belief may not be knowledge [Horwich]
12390 A priori uses truthful available warrants [Kitcher]
3306 Non-existence is pure a priori knowledge [Benardete,JA]
20471 Three possible epistemic a priori tests [Casullo]
20477 Justification can be non-experiential [Casullo]
20298 A priori by justification, or by revisability [Rey]
9128 Attitudes are a priori, not propositions [Sorensen]
9130 Apriority involves someone's cognitive ability [Sorensen]
4645 A priori is a way of demonstrating truth [Baggini /Fosl]

2. Self-Evidence

knowledge that is immediately grasped or obvious
483 Start a thesis with something undisputable [Diogenes of Apollonie]
21249 Self-evident to us, or intrinsically so? [Aquinas]
22128 'Illumination' just leads to scepticism [Duns Scotus]
21253 Demonstrate clear and distinct ideas to others [Leibniz]
9348 Some knowledge of bodies is a priori [Kant]
8657 Self-evidence, logical or intuitive, will do [Frege]
16887 Self-evidence is mind-independent [Frege]
21216 Husserl defends intellectual intuitions [Husserl]
22205 Self-evidence is the invention of theory [Husserl]
7554 Self-evidence is often a mere will-o'-the-wisp [Russell]
5413 Particulars are more evident than principles [Russell]
5412 Some propositions are self-evident after proof [Russell]
5415 Self-evidence comes in degrees [Russell]
5416 Prefer the more to the less self-evident [Russell]
16907 Self-evidence can't guarantee truth [Wittgenstein]
9379 The obvious is true, and always agreed [Quine]
8887 'Self-evident' is not a clear concept [Bonjour]
13480 Self-evidence is a property of basic truths [Hart,WD]
6414 Can two self-evident propositions contradict? [Grayingl]
9597 Many armchair truths are not a priori [Williamson]

3. Innate Knowledge

knowledge arising from within the mind, not from experience
a. Innate knowledge
5052 Good pagans have morality in their hearts [Paul]
22169 Basic truths are present with us [Aquinas]
3630 Experiences don't disprove innate ideas [Descartes]
7570 Innatism is trivial or absurd [Locke]
7709 We must be conscious of innate propositions [Locke]
12472 If knowledge is innateness, it's all innate [Locke]
4018 Innate ideas aid social control [Locke]
12929 All thoughts are innate [Leibniz]

12933 Arithmetic is implicitly innate [Leibniz]
12991 Children learn language very fast [Leibniz]
21081 We see right by our a priori intuitions [Kant]
14774 Innate truths can be wrong, at least sometimes [Peirce]
2990 Many of our ideas seem to be unlearned [Fodor]
3008 Folk psychology ought to be innate [Fodor]
3009 Sticklebacks innately know their rivals [Fodor]
b. Recollection doctrine
5985 Learning is just recollection [Plato]
357 People are clearly recollecting geometry [Plato]
359 Seeing close resemblance proves recollection [Plato]
5961 Soul's good from god, evil from the past [Plato]
1823 All inquiry requires previous knowledge [Epicurus]
5986 Pupils are not taught; they recollect [Augustine]

c. Tabula rasa

5051 Intellect is like a tablet awaiting writing [Aristotle]
20803 We start as blank sheets for concepts [Stoic school]
6025 At birth the soul is a blank sheet [Stoic school]
6230 There is no morality without innate ideas [Cudworth]
7723 The mind starts as an empty cabinet [Locke]
7507 The mind is a blank white paper [Locke]
12474 Minds are blank, bar experience [Locke]
12940 What is a 'blank page' with no ideas? [Leibniz]

4. A Priori as Necessities

a priori knowledge is an insight into necessary truths
2279 A triangle's properties prove its existence [Descartes]
2602 Can experience demonstrate logical relations? [Descartes]
5012 There are eternal truths in the mind [Descartes]
9155 Proofs without experience are a priori [Leibniz]
9344 Maths ends in undemonstrated primitives [Leibniz]
5404 Arithmetic is known without experience [Russell]
9345 Pure a priori involves only necessities [Kant]
16893 Apriori is independent, necessary and general [Kant]
9347 Experience requires a priori rules [Kant]
9352 A priori is derived from unproved generalities [Frege]
16889 A priori truths must derive from generalities [Frege]
16894 Apriori rests on universal quantification [Frege]
5397 Rationalist are right about logical principles [Russell]
5198 'Things have one place' is verifiable [Ierubino]
9354 Are necessities only known a priori? [Devitt]
19565 How can a mind see necessity? [Devitt]
20472 Analyse apriori justification,not propositions [Casullo]
14712 It's a priori if nothing could make it false [Chalmers]
9369 'Snow is or isn't white' isn't stipulated [Boghossian]

5. A Priori Synthetic

a priori knowledge which refers to the external world
20943 One and many give synthetic a priori [Kant]
5402 Kant showed a priori synthetic is possible [Kant]
5203 Kant fails to defend maths being synthetic [Ayer]
3342 Parallel lines are synthetic a priori [Kant]
16916 The a priori synthetic is of appearances [Kant]
5527 That a straight line is shortest is synthetic [Kant]
5528 Newton's Third Law is a priori synthetic [Kant]
5529 How are a priori synthetic judgments possible? [Kant]
5537 Geometry is basically a priori synthetic [Kant]
5546 Are a priori concepts needed for objects? [Kant]
5558 7+5=12 is not analytic [Kant]
5624 The synthetic a priori anticipates experience [Kant]
3726 The moral law is practical synthetic a priori [Kant]
9225 We can know a priori there are 5 planets [Hegel]
2619 Geometry & its application are quite separate [Ayer]
2513 Synthetic a priori isn't just analytic [Katz]
2794 'A cow is not a horse' is synthetic a priori [Dancy,J]
3341 There is no synthetic a priori [Benardete,JA]
3344 Speculation about unknowables is synthetic [Benardete,JA]
3345 Intuition has to be synthetic a priori [Benardete,JA]
3349 Facts about numbers seem synthetic a priori [Benardete,JA]
3887 Truth and causation are synthetic a priori? [Scruton]
3876 Grasping sports scores is synthetic a priori [PG]

6. A Priori from Reason

a priori knowledge as the produce of pure reason
9343 Pure knowledge needs the disembodied soul [Plato]
3617 I seek first principles by thought alone [Descartes]
5571 Reason contains underived principles [Kant]
9342 Understanding needs a priori commitment [Horwich]

12418 We can't remember long proofs [Kitcher]
9160 The a priori is empirically indefeasible [Field,H]
17714 Aristotelians reject a priori from pure reason [Mares]

7. A Priori from Convention

a priori knowledge simply reports our social consensus
5403 Kant makes logic and maths too human [Russell]
4539 A priori knowledge - just regulation of belief [Nietzsche]
9365 We can hold fast to the a priori - or change [Lewis,CI]
5197 'Things have one place' might be tautological [Ayer]
9005 The a priori/empirical boundary gets blurred [Quine]
9164 We treat basic rules as if they are a priori [Field,H]

8. A Priori as Analytic

a priori knowledge comes from the meanings of words
21250 Evident if predicate in essence of subject [Aquinas]
5525 We can't know 7 and 5 is 12 by analysis [Kant]
2514 Frege expands the analytic to swallow maths [Frege]
7088 Logic & maths can't be synthetic [Wittgenstein]
5204 All a priori truths are tautologies [Ayer]
9383 The a priori is epistemic analyticity [Boghossian]
12424 Is the analytic knowable a priori? [Quine]
6284 What makes a tautology true? [Putnam]
13975 He's better on necessity than a priority [Kripke]
17048 Analytic judgements are a priori [Kripke]
17052 A priori analytic reference-fix is contingent [Kripke]
3088 So-called 'analyticity' is imagination failure [Harman]
3089 It isn't analytic that robot cats are animals [Harman]
18263 Explain a priori by semantics,not by intuition [Coffa]
9332 A priori commitment precedes meaning [Horwich]
9367 Analytic a priori avoid intuition faculty [Boghossian]
9373 Explaining constants made logic analytic [Boghossian]
9380 A priori truth by definition can't get started [Boghossian]
15165 The a priori is just of the analytic [Sidelle]
14704 Know our own meanings a priori? [Schroeter]

9. A Priori from Concepts

a priori knowledge only arises from our concepts
1824 Names require a prior notion of identity [Epicurus]
2191 Relations of Ideas are known a priori [Hume]
18262 The analytic needs complex concepts? [Coffa]
16915 The a priori only concerns sense experience [Kant]
5526 Large sums can't be known by analysis [Kant]
4430 A priori knowledge is relations of universals [Russell]
5411 We know some generalities without instances [Russell]
9353 A priori is indirectly holistically empirical [Devitt]
13406 A priori is analytic and unimportant [Papineau]
9341 Unacceptable meanings aren't apriori knowledge [Horwich]
9334 A priori from stipulation presupposes a priori [Horwich]
12389 A priori knowledge just needs the concepts [Kitcher]
2727 Colour exclusiveness is synthetic a priori [Audi,R]
2728 A priori ideas can be of experienced concepts [Audi,R]
17726 Our concepts can reveal the world [Jenkins]

10. A Priori as Subjective

a priori knowledge is the product of individual minds-
12518 The mind cannot produce simple ideas [Locke]
16914 The apriori is the form of my own sensibility [Kant]
5567 A priori we don't know, we anticipate [Kant]
16909 We can't be illogical, so it is a priori [Wittgenstein]
9339 Innate structures may give a priori knowledge [Horwich]
12416 We know a priori that we exist [Kitcher]
3913 Is a priori justification based on imagination [Casullo]

11. Denying the A Priori

there is no possibility of real knowledge a priori
9337 All science is changeable, so no a priori [Quine]
9338 Quine only rejects the a priori within science [Horwich]
9340 Quantum logic shows logic is a posteriori [Horwich]
20961 The apriori changes, because language does [Habermas]
18272 Platonist a priori is unknowable [Coffa]
9356 A priori is too obscure to explain anything [Devitt]
19564 Naturalism suggests all knowledge is empirical [Devitt]
13476 A priori knowledge has often proved false [Hart,WD]
9384 We can give up strong a priori beliefs [Boghossian]

B. Perception

1. Perception

process from raw experience to awareness of reality
1506 Perception and reasoning are the same [Theophrastus]

20802 Snow isn't, and doesn't look, white [Anaxagoras]
2045 Perception is infallible, so is it knowledge? [Plato]
2067 Senses must converge on an inner self [Plato]
17711 Minds model the thing perceived [Aristotle]
1724 Perception gives pleasure/pain, hence appetite [Aristotle]
1725 Why aren't senses self-aware, or self-moving? [Aristotle]
1730 Why do we have many senses instead of one? [Aristotle]
1732 If senses were physical they'd be self-aware [Aristotle]
16723 Normal perception is almost infallible [Aristotle]
12379 Perception gives no understanding [Aristotle]
2664 How could human senses be improved? [Cicero]
22167 The mind creates our images of things [Augustine]
16724 Senses reveal how they have been deceived [Bacon]
19419 There is unconscious perception [Leibniz]
19353 'Apperception' is knowledge of perception [Leibniz]
7631 Perception (unlike sensation) implies objects [Reid]
21773 Experience has seven stages [Hegel]
15609 The sensible, unlike thought, is singular [Hegel]
20119 Sense awareness is for communication [Nietzsche]
4529 Sensation contains value judgements [Nietzsche]
2780 Perception is direct, indirect, or phenomena [Dancy,J]
12581 Our concepts influence our experiences [Peacocke]
4264 Perception is a higher state than sensation [Scruton]
6502 Reduce perception to information, then causes? [Robinson,H]
6513 Can felt shapes be known by looking? [Robinson,H]
2397 Perception is both an act and a mental state [Chalmers]
6366 Perception directly causes beliefs [Pollock/Cruz]
6860 Colour discrimination is intransitive [Williamson]
6857 Perhaps experience is not as it seems [Martin,M]
7632 Perception is sensations, or concepts, or both [Maudnd]
14585 We have more than five senses [Mumford/Anjum]
20924 All perception is 'seeing as' [Zimmermann,J]
14694 "My dog's got synaesthesia"..... [Sommers,W]

2. Qualities in Perception

perceived characteristics of physical objects

a. Qualities in perception

1532 Sensation is unreal - it varies in individuals [Democritus]
12478 Qualities are powers to produce ideas [Locke]
6991 We don't learn a colour by introspection [Jackson]
15509 Are qualities parts of things? [Lewis]
7028 Dispositions make properties detectable [Heil]
7029 A property IS the way it is [Heil]
7030 Properties can't have properties [Heil]
8276 Properties are adjectival, not objectual [Lowe]

b. Primary/secondary

16717 What are the basic features of body? [Aristotle]
16726 Deduce secondaries from primaries? [Buridan]
16720 Secondaries are graded mixes of primaries [Conimbricense]
15989 Secondary qualities are colourless [Locke]
15971 Secondary qualities are sensation-producers [Locke]
12481 Secondary conflict, primary agreement [Locke]
12546 Connection of primary to secondary? [Locke]
18264 Shape but not colour from concept [Kant]
5453 Essentialists like primary/secondary [Ellis]
3249 Science needs a primary/secondary division [Nagel]
6512 Secondary properties use only one sense [Robinson,H]

c. Primary qualities

1728 Movement, shape etc appeal to all the senses [Aristotle]
14037 Atoms only have primary qualities [Epicurus]
16718 Primary qualities cause sensible qualities [Albertus Magnus]
16719 Secondary qualities are mixed primaries [Burley]
6490 Geometry is the only primary quality [Descartes]
6725 Locke's matter is inert, with real qualities [Locke]
15982 Primary qualities are the explanatory ones [Locke]
12479 Primary qualities produce simple ideas [Locke]
12480 Some ideas resemble their objects [Locke]
7049 Locke's primary qualities are powers [Locke]
3933 Do primary qualities really exist in bodies? [Berkeley]
5466 There are seven or eight primary qualities [Ellis]
3901 Touch gives only primary qualities [Scruton]
6497 Physicists don't need secondary qualities [Robinson,H]
7299 Maths covers primary qualities, not secondary [Cardinal/Hayward]
7300 Primary qualities are essential to objects [Cardinal/Hayward/Jone]
19647 Mathematical properties are objective [Meillassoux]
1727 Special sensations are standalone & infallible [Aristotle]
16725 Loss of a sense is loss of some knowledge [Aristotle]
5949 Colours are relative to the eye [Epicurus]
20781 Non-graspables: unclear or nonexistent [Stoic school]
16721 Secondaries track changes in primaries [Giles of Orleans]
7401 Heat and colour only exist internally [Galileo]
5454 Tastes and smells are all in the mind [Galileo]
15962 A 'texture' is an unobservable structure [Boyle]
15964 Secondary qualities are not mental [Boyle]
15973 Textures in Locke are intrinsic powers [Locke]
7050 Locke didn't think colours are in the mind [Locke]
15979 Secondary qualities are just bare powers [Locke]
19430 Perceptions are useful but deceptive [Leibniz]
21447 Red experiences don't resemble red things [Kant]
5532 Colours are in the subject not the thing [Kant]
6498 Are secondary qualities blurred primaries? [Armstrong]
7440 Secondary qualities are microscopic primaries [Armstrong]
7374 Wavelengths and colours don't directly link [Dennett]
6494 What exactly is colour a property of? [Robinson,H]
6499 We experience shape many ways, colour one way [Robinson,H]
6500 Do new senses create new secondary qualities? [Robinson,H]
4108 Is pheno-thio-urea bitter or tasteless? [Crane]
15061 Colours may reflect true facts [Fine,K]
7044 Secondary are primary, but related to us [Heil]
7051 Secondary properties depend on the primary [Heil]
7052 Radiant/diffused colour isn't surface property [Heil]
9118 Spectrum colour bands arise from biology [Sorensen]
6375 Choc taste is finer grained than sweetness [Polger]
12721 Both primary and secondary are apparent [Leibniz]
19358 Pain and colour are like their stimuli [Leibniz]
6726 We can't conceive bodies without sensibilia [Berkeley]
6728 Faster ideas slow motion down [Berkeley]
6727 Shape is just as secondary as heat [Berkeley]
3934 What we see as small is large to insects [Berkeley]
3935 Apparent size varies with distance away [Berkeley]
3937 Solidity is either not sensed, or relative [Berkeley]
3940 Distance isn't perceived directly by sight [Berkeley]
2239 If secondary qualities are mental, primary too [Hume]
16924 Primary features are mere appearances [Kant]
5679 We can't grasp a separation of qualities [Dancy,J]
5680 Primary and secondary qualities feel the same [Dancy,J]
3885 Primary qualities attach to secondaries [Scruton]
3910 What are secondary qualities OF? [Scruton]
7053 A theory is bad if it says tomatoes aren't red [Heil]
9308 Subjective/objective and prim/sec are linked [Svendsen]

3. Representation

theory that mind represents in order to perceive

20894 Man is separated from reality [Democritus]
1734 The soul always uses images to think [Aristotle]
22168 We perceive by awakened potentials [Aquinas]
7400 Words and images refer without resemblance [Descartes]
18258 Ideas mediate reality for us [Arnauld,A/Nicole,P]
12948 Pain resembles a bodily movement [Leibniz]
6495 Berkeley got idealism from fear of scepticism [Robinson,H]
3957 Perceptions are real, not appearances [Berkeley]
2237 Men instinctively take sensation for reality [Hume]
16913 The real properties evade representation [Kant]
6514 Primary qualities show reality's structure [Russell]
13983 Representation needs lots of prior knowledge [Ryle]
4043 Three shapes suffice to identify an elephant [Goldman]
8128 Representational reasons need propositions [McDowell]
2716 To fully see a field requires a concept of one [Audi,R]
2717 Do perceptions inevitably cause beliefs? [Audi,R]
7629 We see directly, by representation [McGinn]
3899 Perception is an intentional state [Scruton]
6484 Moderate empiricists like representation [Robinson,H]
6638 We recognise forms as well as knowing them [Lowe]
6644 How do we get 'direct' information of reality? [Lowe]
6647 Shape comparison depends on the rotation [Lowe]
21215 The representation may not be a likeness [Velarde-Mayol]

4. Sense Data

existence of data between the object and perceiver

a. Sense-data theory

16638 Qualities are false, and only motions are real [Hobbes]
2356 Appearances can be separated from objects [Hobbes]
4164 Data plus understanding is perception [Schopenhauer]
6415 Sense-data come last in theories, not first [Russell]
5358 Sense-data are things immediately known [Russell]
6417 Russell abandoned sense-data in 1921 [Russell]
6474 Seeing and what is seen are separate [Russell]
18280 Life is sense-data; talk is of objects [Wittgenstein]
6524 Sense-data reports both illusions and objects [Ayer]
2615 Sense-data allow neutral talk of appearances [Ayer]
6455 In unusual situations, 'sense-data' is useful [Lacey]
6456 Sense-data are neutral unjudged experiences [Angeles]
6451 Visual sense data are an inner picture show [Blackburn]
2782 We are aware of stars which no longer exist [Dancy,J]
3579 Sense data can't misrepresent reality [Williams,M]
2719 Sense-data are a representative realism theory [Audi,R]
2720 Sense-data explain illusions & hallucinations [Audi,R]
6508 Sense-data rejects direct realism [Robinson,H]
4104 Taste the wine, or its sourness [Crane]
4105 Seeing double supports sense data [Crane]
2422 The retina simplifies light waves [Chalmers]
6452 'Sense-data' is a concept in early empiricism [Mautner]
7635 Sense-data give foundations and explanation [Maudnd]

b. Nature of sense-data

22013 Representations relate to subject and object [Reinhold]
6483 For Russell, we are aware of our own brain [Russell]
8244 Sense-data are qualities without subjectivity [Russell]
6462 Sense-data are part of physics [Russell]
6464 Sense-data are usually objects within the body [Russell]
6463 Sense-data are not part of the subject [Russell]
6467 Sensible aren't data to two people at once [Russell]
7549 Loss of mind would not destroy sense-data [Russell]
7553 Sense-data are purely physical [Russell]
17642 Mind-independent sense data are absurd [Putnam]
6457 Sense-data could be mind-independent [Vesey]
6453 Maybe sense-data are public aspects of things [Lacey]
6454 What exactly is a sense-datum? [Lacey]
2775 Which data do we accept as facts? [Dancy,J]
6480 Sense-data have no intrinsic intentionality [Robinson,H]
6482 Are sense-data in objects, or like them? [Robinson,H]
2713 What exactly are sense-data? [Tye]

c. Unperceived sense-data

6459 We don't know if sense-data exist unobserved [Russell]
6461 Sense-data must be given to exist [Russell]
6460 'Sensibilia' are unexperienced sense-data [Russell]
21583 Change involves indistinguishable sense-data [Russell]

d. Sense-data problems

8854 Are we 'acquainted' with sense-data? [Williams,M]
6458 Individuating sense-data is difficult [Russell]
6469 Are sense-data subjective? [Russell]
6476 With no subject there are no sense-data [Russell]
15580 Sense-data are always of something [Heidegger]
18729 Statements of facts include their sense-data [Wittgenstein]
6501 Wittgenstein attacked private sense-data [Wittgenstein]
6493 We are aware of properties OF things [Firth]
21686 Sense-data are dubious abstractions [Quine]
15819 What are a sense-datum's features? [Chisholm]
3296 Sense data are wrongly treated as objective [Nagel]
15244 We experience qualities OF things [Harré/Madden]
7639 Inner perception won't explain perception [Evans]
3581 Can non-propositional sense data be knowledge? [Williams,M]
6505 Rejecters of sense-data fear scepticism [Robinson,H]
4101 We smell a smell, but we see things directly [Crane]
4102 Perception relates to intentional states [Crane]
6639 Are hallucination and perception separate? [Lowe]
4720 Sense-data can't be doubted if non-conceptual [O'Grady]

5. Interpretation

role of interpretation in a direct act of perception

1821 Sensations can never be compared [Epicurus]
20792 Perception is accepted presentations [Stoic school]
1883 How can we judge if senses match reality? [Sext. Empiricus]
2295 Why does pain make us unhappy? [Descartes]

4831 We can't help believing in external objects [Spinoza]
2774 For Kant cognition and sensing are inseparable [Kant]
22033 Avoid separation of intuitions and concepts [Hegel]
4163 All perception is intellectual [Schopenhauer]
2878 We only see an approximation of a tree [Nietzsche]
7156 Sense perceptions contain values [Nietzsche]
7181 Pain shows the value of the damage [Nietzsche]
7129 Only processed perceptions are conscious [Nietzsche]
6098 Perception goes directly to facts [Russell]
20749 All perceptions have a context [Heidegger]
18278 Perception is partly constructed by us [Reichenbach]
20750 Experiences flow; minds don't link them [Merleau-Ponty]
3482 Perception is a function of expectation [Searle]
4049 Human colour interpretation is unpredictable [Goldman]
19092 Our experience is cultured, not Given [McDowell]
2718 Perception gives propositions via concepts [Audi,R]
4910 Sense organs reduce variety to sameness [Carter,R]
4911 Classify, then name, locate, associate, feel [Carter,R]
9124 We can't see a mask-nose as concave [Sorensen]
17979 Categorisation sharpens perception [Murphy]

6. Inference in Perception

inference is an essential part of perception

1544 The focused mind perceives, not the senses [Diogenes of Apollon]
5220 Particular facts are directly perceived [Aristotle]
12482 Can a newly sighted man distinguish shapes? [Locke]
13005 Reason and regularity validate sensation [Leibniz]
6935 Human smell and taste are intellectual [Feuerbach]
16859 Perception: observation to inference is 1:10 [Mill]
18309 Reason falsifies the truth of the senses [Nietzsche]
7628 Broad rejects inference in representation [Broad]
15248 Inference in perception is unconvincing [Harré/Madden]
12580 Experience has no conceptual content [Evans]
7643 Our concepts won't cover all the colours [Evans]
2465 Can't perception be its own justification? [Fodor]
12579 Experience - protopositions - concepts [Pecocke]
4109 Perception is too rich for concepts to cover [Crane]
7710 Perception may not involve sensation [Lowe]
6362 Sense evidence is not beliefs [Pollock/Cruz]
7638 We are aware of objects, not qualia [Maurd]
7642 Can non-conceptual experience be rational? [Maurd]

7. Causal Perception

perception as a causal chain from world to mind

5927 The causal theory is better than sense data [Ross]
5193 Causal perception refers to unobservables [Ayer]
3900 Perception is for belief, not experience [Armstrong]
2784 To see reality, reality must cause my seeing [Dancy,J]
2785 Perceptual beliefs can be caused by facts [Dancy,J]
7871 Perceptual concepts are not just causal [Papineau]
7711 Perception must be caused by objects [Lowe]
6640 A causal theorist can be a direct realist [Lowe]
6645 Blindsight undermines the causal theory [Lowe]
3757 True perceptions are caused by objects [Bernecker/Dretske]

8. Adverbial Theory

qualities are not objects but ways in which a perception occurs

15816 To feel depressed seems adverbial [Chisholm]
15818 Sense-data are person-modifications [Chisholm]
15817 We can sense 'rectangularly' [Chisholm]
5691 Not 'see red image', but 'appeared to redly'? [Shoemaker]
8897 Minds must apprehend sense-data adverbially [Bonjour]
6506 You can't sense 'redly-squarely-tablely' [Robinson,H]
6507 Adverbialism sees sense contents as modes [Robinson,H]
6511 If sensations are modes they aren't properties [Robinson,H]
4103 Are properties of experiences, not objects [Crane]
6637 Complex perceptions can't be adverbial [Lowe]
7640 Mountains are adverbial, but have properties [Maurd]
7641 Adverbialism is direct, with no sense-data [Maurd]

C. Rationalism

1. Rationalism

reason as ultimate basis of all knowledge

430 The senses are useless if the soul is bad [Heraclitus]
3058 Reason alone will prove the truth of facts [Parmenides]
517 The mind cannot survive without the senses [Democritus]
2162 Mind's best part prefers measurement to sights [Plato]
2068 What sense perceives number, identity, good? [Plato]

2069 Reason grasps being & truth, and hence things [Plato]
2078 Senses can muddle numbers, but not the mind [Plato]
151 True reality is purely intellectual [Plato]
1637 A soul without understanding is ugly [Plato]
334 Astronomy is not just physical observation [Plato]
1726 Perceive particulars, know universals [Aristotle]
22117 We know reality by direct illumination [Augustine]
20224 Knowledge needs the virtues of reason [Aquinas]
3611 Only understanding can give us knowledge [Descartes]
2263 Perception of wax is with mind, not senses [Descartes]
3627 Dogs recognise things by experience [Gassendi]
2264 We judge that moving clothes are people [Descartes]
2265 Bodies are perceived by intellect, not senses [Descartes]
22011 First principles are known by the heart [Pascal]
4865 The eyes of the mind are proofs [Spinoza]
4302 Only reason can reveal universal truths [Leibniz]
12930 Senses confused, intellect distinct [Leibniz]
12947 Reason avoids sense scepticism [Leibniz]
2110 Astronomy is known by experience or reason [Leibniz]
5569 Understanding and sensation are inseparable [Kant]
19572 Experience is the test of reason [Novalis]
15625 Sensation is secondary, thought primary [Hegel]
20265 Completing systems produces distortions [Nietzsche]
21577 General truths need a priori generality [Russell]
5200 For rationalists thought gives knowledge [Ayer]
4303 'Substance' is essential to rationalism [Cottingham]
20897 Sense knowledge is obscure; other is genuine [Foa]
8880 Logicism sympathises with rationalism [Sosa]
3704 Justification can be a priori but fallible [Bonjour]
3707 Rules of reason have to be intuitive [Bonjour]
2504 Is mind an innate modular evolved computer? [Fodor]
2729 Rationalists endorse synthetic a priori truths [Audi,R]
2741 Justification is ultimately justified a priori [Audi,R]
8725 Rationalism is universal maths method [Shapiro]
17705 Imagined limits aren't modal insights [Mares]
6576 'Circumspect rationalism' says intellect rules [Fogelin]

D. Empiricism

1. Empiricism

knowledge is essentially derived from experience

1820 Truth needs senses, preconceptions & passions [Epicurus]
20805 All concepts are composed from experience [Stoic school]
12121 We infer beyond what we can see [Bacon]
3648 Empiricists are ants, rationalists are spiders [Bacon]
16688 All conceptions proceed from the senses [Hobbes]
7405 Experience can't prove universal truths [Hobbes]
7724 All our ideas come from experience [Locke]
19431 Mind is experiences plus understanding [Leibniz]
6720 We know the mind, and simple or complex ideas [Berkeley]
3953 Imagination is fainter than reality [Berkeley]
21309 Intelligible propositions need like perception [Hume]
2182 Impressions are lively, ideas less so [Hume]
2184 All ideas are copied from impressions [Hume]
2190 Relations of Ideas & Matters of Fact, that's it [Hume]
2192 Only cause gets us beyond memory and senses [Hume]
2246 Relations of ideas, or facts, or rubbish [Hume]
15619 Empiricism for the particular, and restraint [Hegel]
15620 Empiricism: we are involved in knowledge [Hegel]
14789 Experience must include inner experience [Peirce]
7290 Russell must believe in a tabula rasa [Russell]
5357 Begin from experience [Russell]
5382 There are five types of acquaintance [Russell]
5389 Descriptions get us beyond private experience [Russell]
16476 Experience can confirm simple statements [Russell]
13932 Empiricists dislike abstract entities [Carnap]
4729 Calling the a priori analytic helps empiricism [O'Grady]
5180 Metaphysics must begin with the senses [Ayer]
5169 Analytic & synthetic propositions, or verbiage [Ayer]
1620 Are analytic and synthetic really separate? [Quine]
1629 Aim to match experience as simply as possible [Quine]
8450 Whole theories are Quine's empirical base [Quine]
19046 Empiricism has made five big steps [Quine]
19049 Sentences are too short for full meaning [Quine]
8252 Davidson's experience is non-rational [Davidson]
8253 Impressions already have conceptual content [McDowell]
2961 Empiricism is about both meaning and knowledge [Lockwood]

3172 Experience justifies and causes knowledge [Rey]

2. Associationism

knowledge built by ideas forming links in the mind

20306 Simultaneous feelings become joined [Spinoza]
12527 Associations are natural or conventional [Locke]
12542 Knowledge is connections of ideas [Locke]
12555 Knowledge is correlation of ideas and objects [Locke]
6489 Associationism explains intentionality [Robinson,H]
2189 Resemblance, contiguity and cause make links [Hume]
22005 Associations need norms to explain content [Kant]
14765 Association of ideas is great philosophy [Peirce]
19253 'Association by resemblance' needs reversing [Peirce]
15269 Impressions are too simple to combine [Harré/Madden]
4047 Minds have inbuilt unifying principles [Goldman]
3978 Associations match ideas to the world [Fodor]
12617 Associationism can't explain truth [Fodor]
2493 Empiricism relies on abstraction, not theories [Fodor]
7510 A mind is an all-purpose learning device [Pinker]
14955 Some associations are harder to learn [Ladyman/Ross]
11141 Modern empiricism is psychology not semantics [Margolis/Laurer]

3. Pragmatism

knowledge is what works well in practice

1890 Distinguish ambiguities by usefulness [Sext. Empiricus]
14794 Seek belief beyond doubt, not 'Truth' [Peirce]
14795 Pragmatism aims to explain meaning [Peirce]
18989 Pragmatism accepts whatever is useful [James]
6441 Judge truth by causes, not effects [Russell]
13937 Judge existence claims by their fruit [Carnap]
12625 Pragmatism is the worst idea ever [Fodor]
4746 Pragmatism is about belief, not truth [Engel]

4. Pro-Empiricism

reasons for favouring the empirical view of knowledge

1500 Reason requires continuous sensory input [Heraclitus]
543 Love of sensation shows love of knowledge [Aristotle]
1822 Reason is based on senses, so can't judge them [Epicurus]
5702 Sense are the best guide to truth [Lucretius]
5729 Reasons rests on senses, and is less reliable [Lucretius]
16637 Sensation and thought are our absolute limits [Locke]
3938 Geometry is sensed, so isn't pure ideas [Berkeley]
2183 Creativity is just the joining of ideas [Hume]
2186 No ideas without prior experience [Hume]
2194 Properties of water and fire can't be deduced [Hume]
2702 Only fools argue against experience [Hume]
2205 You can't reason without experience [Hume]
2217 Only experience resolves obscure definitions [Hume]
21285 Things are obvious, after experience [Hume]
6577 Minds beyond experience meet disaster [Kant]
16925 Appearance in experience gives truth [Kant]
12108 All knowledge rests on observation [Comte]
9082 Clear concepts need good experience [Mill]
5185 Only experiences disprove experiences [Ayer]
21685 Empiricism is derived from science [Quine]

5. Empiricism Critique

rejection of knowledge arising just from experience

13257 Senses are too feeble to attain truth [Anaxagoras]
1693 Perception-memory-logos-experience-knowledge [Aristotle]
1860 Knowledge isn't sensed, but comes from senses [Aquinas]
6228 The judge of senses must be above them [Cudworth]
2793 Breaking all ideas into experiences is tough [Locke]
5024 Not all knowledge is from the senses [Leibniz]
13001 Sensory ideas are inherently confused [Leibniz]
6182 Hume's empiricism left out maths [Hume]
3902 Sensation and perception are different [Scruton]
5538 Understanding and senses unite for knowledge [Kant]
5559 Degrees of sensation are known a priori [Kant]
7544 To experience is not to understand [Goethe]
19590 Empiricists are passive thinkers [Novalis]
15622 Empiricists use a metaphysic unconsciously [Hegel]
15621 Empiricism has to deny the supersensible [Hegel]
15632 Empiricism blocks thought about perceptions [Hegel]
14785 Experience is always located among ideas [Peirce]
4532 Simultaneous opposite sensations are possible [Nietzsche]
21532 Full empiricism is not tenable [Russell]
5376 Knowledge of existence exceeds acquaintance [Russell]
16485 Universal truths are empirically difficult [Russell]

16488 How to know 'it's not raining' by observation? [Russell]
 6431 What exactly is 'experience'? [Russell]
 5199 Empiricism can't explain necessary truths [Ayer]
 19488 Dogma 2: truths link to specific data [Quine]
 8178 Empirical and a priori are extremes of a scale [Dummett]
 6400 Empiricism needs a scheme/content distinction [Davidson]
 8255 Is the world's influence causal or rational? [McDowell]
 2522 Empiricism can't explain necessary maths/logic [Katz]
 8052 Empiricism and science are incompatible [MacIntyre]
 8881 Most knowledge lacks sensory support [Sosa]
 2494 Concepts contain more than raw experiences [Fodor]
 6081 Modality is big trouble for empiricists [McGinn]
 10404 Extreme empiricists can't explain things [Swoyer]
 14918 Is Empiricism itself empirical? [Ladyman/Ross]

E. Direct Knowledge

1. Common Sense

everyday thought, treated with respect

22141 Just block the objections to common sense [Aristotle]
 95 If everyone believes it, it is true [Aristotle]
 6492 Reid was a direct realist [Reid]
 8794 The obvious is rare and supports little [Sosa]
 2960 Genuine images and delusions are the same [Lockwood]
 14466 We need to understand common sense [Thomasson]

2. Intuition

direct awareness of knowledge

79 Intuition grasps unprovable definitions [Aristotle]
 16111 Aristotle gets our intuitions from language [Aristotle]
 12543 Intuition directly knows the obvious [Locke]
 8736 Intuition is particular and immediate [Kant]
 16911 Intuition represents an object [Kant]
 9185 Bolzano wanted proof, not Kantian intuition [Bolzano]
 16900 Intuitions cannot be communicated [Frege]
 14830 Intuition only recognises possibilities [Nietzsche]
 21221 Only direct conscious seeing can legitimate [Husserl]
 10040 Russell proved logical intuition contradictory [Russell/Whitehead]
 11079 Intuition must still be evaluated [Wittgenstein]
 4948 Intuition is the ultimate support for truth [Kripke]
 13408 Intuitions contain real information [Papineau]
 16534 Intuitions are shifting and unreliable [Lowe]
 9374 Geometrical intuitions turned out wrong [Boghossian]
 9592 Intuition reveals conceptual competence [Williamson]
 20181 Analysis falls back on intuitions [Williamson]
 20182 'Intuitive' often adds nothing [Cappelen]
 11077 Intuition has nine key features [Hanna]
 11078 It is possible for intuition to be rational [Hanna]
 11080 Intuition resembles memory or imagination [Hanna]
 14891 Intuitions are unreliable [Ladyman/Ross]
 17734 But why are good intuitions reliable? [Jenkins]

3. Inspiration

knowledge without evidence or reason

14773 Merely inspired ideas have to be obscure [Peirce]
 14772 Inspired idea, but have we understood it? [Peirce]
 14771 Only reason can verify inspiration [Peirce]

4. Memory

memory as source and preserver of knowledge

11245 Many memories are one experience [Aristotle]
 2665 How can we remember what is false? [Cicero]
 18452 Memory is reproduction of past thought [Porphyry]
 20250 Do we actually forget anything? [Nietzsche]
 22220 We experience memories as being past [Husserl]
 21854 Memory is immediate, not afterwards [Bergson]
 5414 Images are present, so can't be memory [Russell]
 2792 Remembered past events may not have happened [Russell]
 21500 Coherence makes empirical memory reliable [Lewis,CI]
 21501 Without memory we can't even be sceptical [Lewis,CI]
 18734 False memory implies another criterion [Wittgenstein]
 3493 Memory exists to guide current performance [Searle]
 3101 Memory is more inference than preservation [Harman]
 2788 Remembering representations has two barriers [Dancy,J]
 2787 Illusions & time-lag suggest indirect memory [Dancy,J]
 2790 Memory needn't involve the past, or images [Dancy,J]
 2791 Eliminative or reductive about memory? [Dancy,J]
 2724 I may remember without recall or image [Audi,R]
 2725 Remembering entails knowing [Audi,R]

4919 Thought and memory are not sharply divided [Carter,R]
 7513 Is memory in protein, synapses, or strengths? [Pinker]
 6667 Memory of facts, skills and autobiography [Lowe]
 3759 Memories can give new knowledge [Bernecker/Dretske]
 15703 Memories often conform to a theory [Gelman]

13. Knowledge Criteria

A. Justification Problems

1. Justification

general issues about the justification of knowledge

a. Justification issues

6595 Is our criterion of truth correct? [Pyrrho]
 3831 Reasons can be in the world or the mind [Searle]
 8836 Must all justification be inferential? [Ginet]
 8837 Inference cannot originate justification [Ginet]
 12413 Warrant make knowledge of true belief [Kitcher]
 3564 Are people justified, or propositions? [Williams,M]
 6371 Follow Bayes' Theorem and the Simple Rule [Pollock/Cruz]
 3752 Is the person or the belief justified? [Bernecker/Dretske]
 21626 KK is false if no knowledge concept [Williamson]
 4722 Two big questions: foundations? externalism? [O'Grady]
 6150 'Warrant' turns a true belief into knowledge [Merricks]
 19540 Justified belief, or justified believer? [Dougherty/Rysiew]
 19729 'Modal epistemology' involves possible worlds [Black,T]
 19703 Epistemic justification is the truth-aimed one [Vahid]

b. Need for justification

1923 Knowledge and true opinion are equal as guides [Plato]
 174 Knowledge requires supporting reasons [Plato]
 2140 True belief is a blind man on the right road [Plato]
 2089 A rational account needs more than elements [Plato]
 8331 To know something, grasp its primary cause [Aristotle]
 19517 Believing without reasons is just fantasy [Locke]
 12898 Knowledge doesn't need justification [Lewis]
 8811 When is it all right to believe something? [Pollock]
 19734 Practically, true opinion equals knowledge [Greco]
 6800 Justification matters more than 'knowledge' [Bird]
 19539 Knowledge is primitive, so justification rules? [Dougherty/Rysiew]

c. Defeasibility

20797 Knowledge is unshakable perceptions [Zeno of Citium]
 20473 Justification needs defeater absences [Kitcher]
 20474 Blocking is overriding; weaken is undermining [Casullo]
 6589 Knowledge requires elimination of defeaters [Fogelin]
 19567 If no undermining facts exist, it's knowledge [Kvanvig]
 19717 Can a defeater itself be defeated? [Grundmann]
 19716 Simple reliabilism can't cope with defeaters [Grundmann]
 19715 Defeaters can rebut, undercut, or defeat [Grundmann]
 19713 Exclude true but misleading defeaters [Grundmann]
 19714 Knowledge means no existing defeaters [Grundmann]

2. Justification Challenges

specific problems with the nature of justification

a. Agrippa's trilemma

2085 Syllables and letters stand or fall together [Plato]
 2091 Knowledge of a thing is required to know it [Plato]
 1671 Knowledge is unfounded and so impossible [Aristotle]
 8850 Justification infinite, arbitrary or circular? [Agrippa]
 1816 Proof is either circular or arbitrary [Diog. Laertius]
 8840 Five responses available for the regress [Cleve]
 8834 Infinitism says warrant just increases [Klein,P]
 2754 Basics are non-belief, self-justified, or none [Dancy,J]
 8851 Regresses presume linear justification [Williams,M]
 2731 Justification is infinite, circular or founded [Audi,R]

b. Gettier problem

5429 True belief may not be knowledge [Russell]
 5430 Badly reasoned true belief is not knowledge [Russell]
 6444 Lucky true belief is not knowledge [Russell]
 8886 True justified belief is not sufficient [Gettier]
 20225 For internalists Gettier mishaps are external [Zagzebski]
 20226 Justification and truth need tight links [Zagzebski]
 20228 No Gettier if justification entails truth [Zagzebski]
 20227 Gettier cases: bad luck, then good luck [Zagzebski]
 19004 To know you must know how it is true [Yablo]
 19699 Gettier case is luckily justified true belief [Hetherington]
 19728 Lucky knowledge has bad connections [Black,T]
 19266 Disjunctive belief splits justification/truth [Vaidya]

19260 Gettier separates justification and truthmaker [Vaidya]

c. Knowledge closure

20769 Believing in objects is 'reasonable' [Sphaerus]
 6445 Can you eliminate alternatives to your belief? [Dretske]
 19544 Know P, know P implies Q? Then know Q! [Dretske]
 19545 We needn't regret implications of regrets [Dretske]
 19546 Knowing by perception and implication differ [Dretske]
 19547 Implication, but do the reasons transmit? [Dretske]
 19548 To keep simple truths, abandon closure [Dretske]
 19549 Entailment doesn't entail evidence for it [Dretske]
 19550 We don't remember that the past is real [Dretske]
 8817 Irrelevant entailments are not justifications [Pollock]
 19524 We can't know every entailment of a belief [Conee/Feldman]
 19551 How are heavyweight implications known? [Hawthorne]
 19552 Is implied knowledge less and less reliable? [Hawthorne]
 19554 Deny knowing P if we know P and Q? [Hawthorne]
 19499 Does the entailment have any evidence? [Pritchard,D]
 19500 Favouring says entailments strengthen beliefs [Pritchard,D]
 19502 Knowledge needs discrimination of contrasts [Pritchard,D]

3. Internal or External

whether justification is mainly inside or outside the mind

a. Pro-internalism

604 Is knowledge cohabitation of knowing & soul? [Lycophron]
 2087 Is a rational account just expressing belief? [Plato]
 2090 A distinguishing mark is a rational account [Plato]
 4835 True knowledge must be self-aware [Spinoza]
 8101 To know is to see inside oneself [Joubert]
 21771 Introspection gives the criterion of knowledge [Hegel]
 8804 Reasons are not the same as evidence [Davidson]
 8830 Forgotten evidence justifies beliefs [Goldman]
 6871 Beliefs don't need conscious justification [Goldman]
 6872 Internalism must cover Forgotten Evidence [Goldman]
 6874 Is there enough time to compute coherence? [Goldman]
 8814 Norms are internal procedure rules [Pollock]
 2749 Internalists must know the belief's cause [Dancy,J]
 2770 Use coherence for justification but not truth [Dancy,J]
 2739 Internalist justification is right to believe [Audi,R]
 6373 Internalism:externals vary, justification won't [Pollock/Cruz]
 19708 Rational beliefs internally enhance my system [Foley]
 4724 Must a believer know the reasons for belief? [O'Grady]
 19679 Do internalists need access to justifications? [Kvanvig]
 19498 Internalism is accessing your justification [Pritchard,D]
 19682 Evidence is of most interest to internalists [McGrew]
 19705 Internal access is needed, not just mentality [Vahid]
 19707 We must access reasons, and their link to truth [Vahid]
 19706 Is actual access needed, or only possible? [Vahid]

b. Pro-externalism

18260 Knowing what we know would amaze us [Kant]
 3074 Reasons for belief are usually unconscious [Harman]
 8832 Animals have well-formed beliefs [Goldman]
 19506 Internalism has a big problem with scepticism [Pritchard,D]
 19709 Internalism exaggerates deliberation [Vahid]

c. Disjunctivism

12800 Understand knowledge, or justification? [Foley]
 19496 Disjunctive justification: factual and known [Pritchard,D]
 19497 Perceptions and hallucinations are different [Pritchard,D]

B. Internal Justification

1. Epistemic virtues

values and qualities need for good justification

20782 Dialectic is a virtue, containing virtues [Stoic school]
 20194 Intellectual virtues are forms of moral virtue [Zagzebski]
 20206 Prejudice is both intellectual and moral [Zagzebski]
 20208 There are at least thirteen intellectual vices [Zagzebski]
 20210 Practical reliabilism needs further virtues [Zagzebski]
 20215 Justification emulates what virtue would do [Zagzebski]
 19730 Knowledge implies a distinct set of virtues [Kvanvig]
 19731 We can't justify propositions by virtues [Kvanvig]
 19732 Truth, not means of attaining it, has value [Kvanvig]

2. Pragmatic justification

justification guided by practical needs and action

6598 Beliefs should be fixed by external things [Peirce]
 20122 We only 'know' what is useful to the herd [Nietzsche]
 20140 Embrace life-enhancing falsehoods! [Nietzsche]
 2548 Pragmatists see justification as social [Rorty]

3247 Belief is what matters to us, not knowledge [Nagel]
3595 Theory must give way to what works [Williams,M]
12802 Pragmatism of deliberation, not of belief [Foley]
12803 Justification is what is acceptable to oneself [Foley]

3. Evidentialism

view that justification is largely about evidence

a. Evidence

19224 Science always defers to experience [Peirce]
17073 If evidence contradicts everything, reject it [Smart]
3097 Evidence is not a special type of belief [Harman]
7450 Only deduction is true evidence [Hacking]
7451 Things provide evidence, instead of people [Hacking]
16825 Tell negative from irrelevant evidence? [Lipton]
19687 What do missing or weak evidence prove? [McGrew]
19684 Is a new possibility a piece of evidence? [McGrew]
19688 Unlikely evidence can be totally plausible [McGrew]
19686 Law needs two witnesses, historians one [McGrew]
19680 Evidence is beliefs, not facts? [McGrew]
19681 Propositional evidence faces a regress [McGrew]
19689 Bad witnesses can be collectively good [McGrew]
17770 Clifford's dictum blocks general beliefs [Bayne]
17771 Assessments depend on background beliefs [Bayne]
18820 In English 'evidence' is a mass term [Rumfitt]

b. Evidentialism

6587 It's wrong to believe on insufficient evidence [Clifford]
8807 Quality of evidence determines justification [Feldman/Conee]
8809 We ought to believe what evidence indicates [Feldman/Conee]
19520 Evidence is boss, not evidentialism [Conee]
19518 All justification supervenes on evidence [Conee/Feldman]
19683 Narrow propositional evidence, or more? [McGrew]
19722 Know it is evidence, but not why it is? [Mittag]
19723 Forgotten evidence seems fine to us [Mittag]
19720 Evidentialism is propositional, not doxastic [Mittag]

4. Foundationalism

justification must be built on a very secure basis

a. Foundationalism

2081 Maybe things are built from unexplained basics [Plato]
3606 Try to find the rock under the shifting sand [Descartes]
2247 Firm ideas require new solid foundations [Descartes]
2255 One simple fulcrum could lead to great things [Descartes]
5033 All certainties need foundations [Leibniz]
6556 Probability needs underlying certainty [Lewis,Ci]
3597 Foundations need not precede other beliefs [Wittgenstein]
8790 Some beliefs or statements are self-justifying [Chisholm]
8841 Modern foundationalism is more liberal [Cleve]
4255 Externalism is a type of foundationalism [Bonjour]
2752 Foundations need non-inferential justification [Dancy,J]
2771 Foundationalism needs basics and inferences [Dancy,J]
8849 Foundationalism is usually internalist [Williams,M]
3753 Foundationalism avoids an infinite regress [Bernecker/Dretske]
19678 Strong or weak links to foundations? [Kvanvig]

b. Basic beliefs

1670 Basic understanding is unshakable [Aristotle]
20795 Some things are their own criterion [Sext.Empiricus]
5004 Basic Principles must be known first [Descartes]
6944 Foundations just need freedom from doubt [Peirce]
4257 How are basic beliefs possible? [Bonjour]
8896 Conscious states have built-in content [Bonjour]
2756 False beliefs should challenge the foundations [Dancy,J]
3580 Only meaningful experience can be foundations [Williams,M]
8853 Basic judgements safely lack content [Williams,M]
6353 People rarely have any basic beliefs [Pollock/Cruz]
6361 Foundations are self-justified, not certain [Pollock/Cruz]
4582 Five types of basic belief [Baggini /Fos]
8845 Experience content is not belief [Pryor]
19719 Foundations might still be defeasible? [Grundmann]

c. Empirical foundations

5697 Only the senses can settle doubts [Lucretius]
2206 Facts ultimately rest on senses or memory [Hume]
5378 All knowledge is based on acquaintance [Russell]
5163 Basic propositions cannot be wrong [Ayer]
8793 The space of reasons uses basic experiences [Sellars]
8882 Perception could have thick or thin concepts [Sosa]
8883 Foundational experiences need full attention [Sosa]
8823 Perceptions are reasons, but not beliefs [Pollock]

3578 Is empiricism based on judging or experience? [Williams,M]
8855 Sensations can still be misdescribed [Williams,M]
8875 Sensations are reasons, so they have content [Brewer,B]

d. Rational foundations

21398 If no falsehood could seem like that,it's true [Zeno of Citium]
5020 Self-evidence is the basis of thought [Leibniz]
16903 Self-evidence reveals basic justification [Frege]
8885 We partly know our experiences indirectly [Sosa]
3696 A priori needs understanding, not experience [Bonjour]
3703 Empiricists can't avoid a priori justification [Bonjour]
3706 A priori justification can vary in degree [Bonjour]
6357 Rational justification requires prior beliefs [Pollock/Cruz]

e. Pro-foundations

583 The quest for foundations is futile [Aristotle]
8838 Endless justification lacks ultimate support [Ginet]
8796 A belief's regresses are finite and infinite? [Sosa]
8876 Knowledge of faces is inexpressible [Sosa]
4256 Foundations avoid the regress to scepticism [Bonjour]
8842 Examples prove immediate justification [Pryor]

f. Foundationalism critique

16716 Wanting foundations is a heresy [Anon (Par)]
2235 First principles are non-existent or useless [Hume]
5541 A sufficient sign of truth is impossible [Kant]
10486 If rebuilding at sea, jettison cargo! [Boolos]
8485 We must rebuild our ship on the open sea [Neurath]
8792 Foundational experience needs interpretation [Sellars]
8802 Sensation causes belief, but doesn't justify [Davidson]
8825 We can't deduce knowledge from sensation [Kim]
8799 Foundational states must be propositional [Sosa]
8795 Only error-free states can be foundational [Sosa]
2523 Mammal ancestry is a finite regress [Dennett]
3699 Physical statements can't be proved [Bonjour]
2753 Infallible beliefs can't say much [Dancy,J]
3576 Foundations must be secure and adequate [Williams,M]
3577 Eliminating all error destroys some knowledge [Williams,M]
6363 Either all beliefs are basic, or none are [Pollock/Cruz]
3754 Foundations can't be non-epistemic senses [Bernecker/Dretske]
10339 Foundations seem utterly private [Kusch]

5. Coherentism

good justification is beliefs fitting successfully together

a. Coherence as justification

22109 Knowledge is facts within good theories [Aquinas]
15977 Unexperienced facts are judged by what we know [Locke]
7070 Representation matching concepts is knowledge [Kant]
22058 Justification must connect every truth [Hegel]
17639 We believe a whole science, not bits [Russell]
8801 Only beliefs are reasons for other beliefs [Davidson]
6369 Beliefs don't need reasons, to begin with [Harman]
19311 Coherence need not remember justifications [Harman]
19312 Coherence is especially explanatory connection [Harman]
9329 Irrefutable coherence produces knowledge [Lehrer]
8839 A long series gives warrant to reasons [Klein,P]
21506 Coherent justification, correspondence truth [Bonjour]
21509 Many rival systems can be coherent [Bonjour]
21503 Empirical coherence must trust experience [Bonjour]
2773 Coherentism may solve induction & scepticism [Dancy,J]
2779 Coherentist don't also have to be idealists [Dancy,J]
2786 For coherentists justification is like truth [Dancy,J]
19513 Strength of coherence can be contextual [DeRose]
6365 Negative coherence has no regress problem [Pollock/Cruz]
17700 Coherent beliefs explain each other [Mares]
10331 Testimony needs inner and outer coherence [Kusch]
10338 For coherentists only beliefs are reasons [Kusch]
4723 Coherence needs evidence and probability [O'Grady]
6596 Rich circular justification can be coherent [Fogelin]
8618 Coherence justifies if truth explains it [Elgin]
21515 Incoherence matters more than coherence [Olsson]
21514 Coherence is the capacity to answer objections [Olsson]
8843 Pure coherentism denies perception a role [Pryor]
8844 Only beliefs can be justifiers [Pryor]

b. Pro-coherentism

2088 A rational account needs explanation of parts [Plato]
20308 Clarity needs internal comparisons [Spinoza]
19410 Mutual agreement supports science theories [Leibniz]
21579 Coherent experience is treated as real [Russell]

21498 Congruent assertions are mutually enhancing [Lewis,Ci]
21513 Precise definition of coherence is impossible [Ewing]
17660 Discovery is often just finding a fit [Goodman]
3096 Coherentism undermines scepticism [Harman]
21510 Ruining coherence by negation is too narrow [Bonjour]
21511 Novels never achieve full coherence [Bonjour]
21505 Coherent systems need no initial credibility [Bonjour]
21504 Truth explains coherent observations [Bonjour]
2767 Make sets of empirical propositions coherent [Dancy,J]
9126 Bayesians get near-certainty from probability [Sorensen]
6786 Science simplifies as it widens [Bird]
8846 Reasons for beliefs can be cited to others [Pryor]

c. Coherentism critique

21497 Coherence is usually far too broad and vague [Ewing]
6873 Coherence needs concurrent awareness of belief [Goldman]
8879 Full coherence may not entail knowledge [Sosa]
8813 If norms are explicit, a regress results [Pollock]
8891 Does one incoherent area undermine another? [Bonjour]
8892 Coherence accepts non-empirical external facts [Bonjour]
8894 Why should coherence lead to truth? [Bonjour]
3589 Why should all our knowledge be connected? [Williams,M]
3590 Coherence is the a priori basis of coherentism [Williams,M]
2732 Consistency and coherence aren't the same [Audi,R]
2733 How much coherence does justification need? [Audi,R]
2734 Madmen may have coherent beliefs [Audi,R]
6354 Coherence can't accommodate perception [Pollock/Cruz]
6367 Coherence isolates justification [Pollock/Cruz]
10340 Individualistic coherentism is too cramped.. [Kusch]
10345 Individual coherentism lacks normativity [Kusch]
7297 Justification could be coherent but ungrounded [Cardinal/Haywar]
21496 More than testimonial agreement is needed [Olsson]
21499 Reliable information doesn't need coherence [Olsson]
21502 Coherence with reality also needs good input [Olsson]
21512 Extending coherence won't improve probability [Olsson]
19721 Where is experience in the coherence? [Mittag]

C. External Justification

1. External Justification

general issues about external justification

2555 For Locke it is knowledge 'of', not 'that' [Locke]
6948 Settle beliefs by externals, not by thinking [Peirce]
4253 Externalism naturally links belief to facts [Armstrong]
3830 They shouldn't have smoked, but didn't realise [Searle]
8812 Internal norms are selected externally [Pollock]
8816 Externalists take a 3rd person view of knowing [Pollock]
4258 Extreme externalism only requires truth [Bonjour]
3701 Externalism makes reasons irrelevant [Bonjour]
2776 Externalism may not need belief for knowledge [Dancy,J]
9382 Epistemic 'entitlement' is external [Burge]
3571 Externalists don't know they know [Williams,M]
3574 Externalism leaves out social knowledge [Williams,M]
2738 Good prophets have unjustified knowledge [Audi,R]
4065 Is knowledge mental, or linked to the world? [Crane]
6370 External theories: probabilism and reliabilism [Pollock/Cruz]
3755 Justification is normative, not natural facts [Bernecker/Dretske]
4254 Externalism drops traditional justification [Kornblith]
3568 Surely ALL truths are externally justified? [Cross,A]
17723 It's knowledge if the belief explains it [Jenkins]
19704 Identical mentality, different justifications? [Vahid]

2. Causal Justification

justification needs a causal link from facts to beliefs

11052 Psychology blurs justification and cause [Frege]
3790 Cause and content of belief are different [Wittgenstein]
3832 Causes and reasons are not the same [Searle]
8798 Causes of visual beliefs are justifications [Sosa]
16279 Mathematics refutes the causal theory [Lewis]
3795 What is the 'right' sort of causal link? [Dennett]
2746 How are generalities known in causal theory? [Dancy,J]
2747 Misleading justification is not causal [Dancy,J]
3569 Beliefs must be caused by the facts [Williams,M]
3567 Could beliefs about maths be causally based? [Williams,M]
3586 Only a belief can justify a belief [Williams,M]
3898 Beliefs about the future aren't caused by it [Scruton]
6358 Causing a belief is not justifying it [Pollock/Cruz]
10350 Deciding causes is a cultural matter [Kusch]

3. Reliabilism

justification comes from reliable belief-formation

a. Reliable knowledge

303 People who claim truth must prove reliability [Plato]
19724 Knowledge is true, certain, reliable belief [Ramsey]
6356 Maybe only proper functions are reliable [Plantinga]
8829 Justification depends on reliable processes [Goldman]
6875 Reliability involves truth, which is external [Goldman]
8889 Does reliability have further requirements? [Bonjour]
8810 Arrogant character is irrelevant to knowledge [Feldman/Conee]
3573 Reliability involves agreed conditions [Williams,M]
2740 Reliabilism prefers truth as correspondence [Audi,R]
9165 What we value precedes reliability [Field,H]
10343 Is process reliabilism virtue epistemology? [Kusch]
19727 Reliable knowledge has conditional probability [Comesaña]

b. Anti-reliabilism

2866 Reliable processes can still be faulty [Blackburn]
4259 Reliability cannot overrule irrationality [Bonjour]
8890 Rational beliefs rest on known facts [Bonjour]
3565 We shouldn't always trust what is reliable [Williams,M]
2737 Reliabilism must define its process and source [Audi,R]
9162 Believing nothing is very reliable [Field,H]
20187 The ideal is a truth-producing machine? [Zagzebski]
19522 We must also assess the reliability [Conee]
19521 what if pure guesses were reliable? [Conee]
19523 Reliabilism is bad on hypothetical cases [Conee]
19725 Scepticism makes all beliefs unreliable [Comesaña]
19726 Which exact process must be reliable? [Comesaña]
19570 Can reliabilism assess poor justifications? [Kvanvig]

4. Tracking the Facts

hallmark of knowledge is tracking facts if they shift

1772 Knowledge is assertions fixed on the truth [Stoic school]
2748 Justification must be responsive to the truth [Nozick]
19710 Knowledge is sensitive truth-tracking [Vahid]

5. Controlling Beliefs

controlling external factors to produce beliefs

3271 We don't control our own beliefs [Nagel]
2462 Knowledge requires truth and mental causes [Fodor]
3566 Control belief by controlling enquiry [Williams,M]
4764 Control the causes of involuntary beliefs [Engel]
8847 Beliefs are encouraged but not chosen [Pryor]

6. Contextual Justification

justification or knowledge vary according to context

a. Contextualism

12895 Knowledge is relative to domain [Lewis]
19562 Alternative evidence depends on context [Lewis]
9166 There is no 'correct' justification [Field,H]
19558 I'm even unsure of my own knowledge [Cohen,S]
19561 Don't contextualise too quickly [Cohen,S]
19563 Justification makes knowledge contextual [Cohen,S]
19560 Contextualists weakly approve of knowledge [Cohen,S]
12893 Scepticism is true, in context [Cohen,S]
12896 The justification makes knowledge relative [Cohen,S]
19514 Knowing is fixed, but asserting it isn't [DeRose]
19515 Grade contexts by required discrimination [DeRose]
19510 Knowledge can be little more than true belief [DeRose]
19516 Contextualism concerns normal uses of 'know' [DeRose]
10341 Audience and social role decide justification [Kusch]
6597 Fussy justification needs a good reason [Fogelin]
19555 High significance reduces knowledge confidence [Conee]
19508 Contextualism needs an indexical semantics [Schiffer,S]
19509 Is 'know' indexical, or whole sentences? [Schiffer,S]

b. Invariantism

8724 'Know' doesn't vary in its meaning [Unger]
12900 'S knows p' can have fixed content [Bach]
12901 Are sentences baffling out of context? [Bach]
12902 Sceptics don't change the meaning of 'know' [Bach]
12894 No standards are ever fixed for knowledge [Cohen,S]
19511 Is contextualism just philosophy of language? [DeRose]
19556 Knowledge is fixed, but viewpoints vary? [Conee]
19557 Knowledge, yes; but really and truly knowledge? [Conee]
12890 Standards can vary without contextualism [Conee]
12892 Serious epistemology has just one context [Conee]

7. Testimony

role of reports and beliefs of other people in justification

10328 Only experience can vindicate testimony [Hume]
2230 Testimony needs wide and public support [Hume]
7458 Don't trust witnesses who will benefit [Laplace]
6273 Belief in others is innate, not an inference [Putnam]
6274 Empathy gives plausibility, but not knowledge [Putnam]
9214 Unsupported testimony may still be believable [Fine,K]
10324 Testimony actually creates knowledge [Kusch]
10325 Only individualists try to vindicate testimony [Kusch]
10327 Some want to reduce testimony to foundations [Kusch]
10329 Perception is too social to found testimony [Kusch]
10330 A rational source is a foundation [Kusch]
10334 Epistemology meets ethics in testimony [Kusch]
10336 Are powerless people unreliable? [Kusch]

8. Social Justification

justification entirely concerns social consensus

10326 The opinion of others is no help to me [Locke]
12417 Maths proofs need confirmation [Hume]
6599 Knowledge is a right granted in conversations [Rorty]
8800 Knowledge must have a social aspect [Harman]
3270 Justifications end when we want them to [Nagel]
2772 Coherence makes justification a social act [Dancy,J]
10323 Knowledge is a group social status [Kusch]
10335 Lonely genius is individualist epistemology [Kusch]
10348 Private justification aims at imagined others [Kusch]

9. Naturalised Epistemology

justification is the mechanics of successful belief-formation

7627 Psychology presupposes epistemology [Maud]
8871 Drop justification; how is knowledge acquired? [Quine]
8826 Giving up justification is giving up knowledge [Kim]
8827 How do you naturalize normativity? [Kim]
8899 Just study how theories relate to evidence [Quine]
3166 Animals learn for fun as well as reward [Ray]
9275 Non-conscious organisms have knowledge [Gray]

10. Anti External Justification

critiques of the external approach to justification

8815 We can't act on external considerations [Pollock]
4260 Is externalism an irrational attitude? [Bonjour]
3702 Externalism leads to scepticism [Bonjour]
8852 Scepticism makes externalism look false [Williams,M]
19733 Externalism won't explain knowledge value [Greco]
19495 Externalism misses epistemic responsibility [Pritchard,D]
19711 Externalism makes knowledge too easy? [Vahid]

D. Scepticism

1. Scepticism

general doubts about the possibility of knowledge

411 Complete certainty is impossible for men [Xenophanes]
1545 There are always two contradictory arguments [Protagoras]
578 Cratylus was silent and waggled a finger [Cratylus]
577 Truth is either non-existent or unknowable [Democritus]
20895 We know nothing and opinions are flux [Democritus]
1528 Belief is too individual to produce knowledge [Democritus]
492 True reality is unknowable [Democritus]
515 Truth is hidden, and we know nothing [Democritus]
13792 No knowledge, if things always change [Plato]
30611 I am not even sure that I know nothing [Anaxarchus]
6593 Pyrrhonians attack professors, no one else [Pyrrho]
1870 Scepticism finds propositions in opposed pairs [Sext. Empiricus]
1819 Sceptics can't avoid some dogmatism [Diog. Laertius]
6260 Sceptics admit truth but no test for knowledge [Montaigne]
6347 Sceptics doubt cognition as well as beliefs [Pollock/Cruz]
2251 Surely the simple elements of dreams are true? [Descartes]
12949 Visible objects may no longer exist [Leibniz]
2238 We can't prove senses connect to objects [Hume]
2242 Mitigated scepticism encourages modesty [Hume]
4708 Is Kant a sceptic, or a defeater of sceptics? [O'Grady]
14872 False identities distort all of our knowledge [Nietzsche]
14879 Ultimate scepticism is anti-logic [Nietzsche]
4549 Epicurus denied knowledge to save morality [Nietzsche]
6591 Inexpressible or unanswerable doubt impossible [Wittgenstein]
8593 Was my last meal billions of years ago? [Shoemaker]
13314 The opposing arguments are always equal [Kim]
530 Everything has two opposed arguments [Kim]

8722 No one ever knows anything [Unger]
7413 How should we live, without beliefs? [Tuck]
3594 Scepticism shows the limits of explanation [Williams,M]
6071 Existence isn't part of appearances [McGinn]
19501 Sceptics doubt our ability to check error [Pritchard,D]
12401 A toper who spies... [Sommers,W]

2. Types of Scepticism

different modes of scepticism that seem to arise

5548 Hume thought reason was just a deception [Hume]
2243 Mitigated scepticism focuses our enquiries [Hume]
15623 Humean scepticism accepts experience [Hegel]
3575 There are five routes to scepticism [Williams,M]
7322 Doubt facts, or our ability to know them [Miller,A]
6588 Cartesian, Humean & Pyrrhonian sceptics [Fogelin]
18700 Doubt knowledge, or even expressing it? [Button]

3. Illusion Scepticism

our confidence in perception is undermined by illusions

6010 In illusions, what we perceive is accurate [Epicurus]
2668 If one sense is wrong, trust none of them [Epicurus]
2667 True and false appearances look the same [Arcesilaus]
5727 Illusions are actually misinterpretations [Lucretius]
20800 False presentations can resemble the true [Cicero]
1881 Straight oars seem bent in the water [Sext. Empiricus]
1882 The necks of doves change according to angle [Sext. Empiricus]
1872 Square towers seem round from a distance [Sext. Empiricus]
1873 Pressing the eye changes our vision [Sext. Empiricus]
3619 Judgement makes errors, not the senses [Gassendi]
3620 Senses not intellect correct perceptual error [Mersenne]
2249 If senses ever deceived you, don't trust them [Descartes]
2296 Pain in missing limbs makes all pain uncertain [Descartes]
3621 Judgement decides which senses to trust [Descartes]
3944 Could experience remain, but nothing exist? [Berkeley]
2236 Reason must always monitor the senses [Hume]
6642 Illusions occur in odd and passive situations [Lowe]
9121 Illusions lead to knowledge, not scepticism [Sorensen]

4. Demon Scepticism

experience is virtual reality from demon/scientist

2253 Maybe God creates false maths and experiences [Descartes]
2254 Imagine a devil giving me false experiences [Descartes]
8723 You life may only last for an instant [Unger]

5. Dream Scepticism

apparent reality may be just a false dream

2047 Maybe we are dreaming right now [Plato]
581 No one seriously confuses waking and dreaming [Aristotle]
7285 After a dream, am I Chuang Tzu or a butterfly? [Chuang Tzu]
2305 Waking experiences interconnect, unlike dreams [Descartes]
2357 Dreams are daft to wakers, but not vice versa [Hobbes]
5365 A real world will explain dreams [Russell]

6. Scepticism Critique

ways of objecting to strongly sceptical claims

1919 Knowledge is obvious, ignorance unreachable [Plato]
1762 Motion is self-evident and undeniable [Diogenes of Sin.]
6592 Pyrrhonians are 'negative dogmatists' [Pyrrho]
20794 Prove there is no criterion? [Sext. Empiricus]
3064 Sceptics contradict their own teachings [Diog. Laertius]
3604 One can never abandon ALL beliefs [Descartes]
2294 I cannot control what my senses experience [Descartes]
6488 Locke has no patience with scepticism [Locke]
19392 Skip scepticism; many things are indubitable [Leibniz]
2240 You can't argue against argument itself [Hume]
2241 No good comes of excessive scepticism [Hume]
5592 Scepticism: the euthanasia of pure reason [Kant]
5595 Scepticism is absurd in maths [Kant]
6945 Once doubt ends, argument is pointless [Peirce]
22206 Science just ignores scepticism [Husserl]
21578 Scepticism merely makes us hesitant [Russell]
22163 Prove reality by realising the prover [Heidegger]
3596 Total doubt can't even get started [Wittgenstein]
4160 You can mistrust senses, but not beliefs [Wittgenstein]
8805 Shared truths rebut scepticism [Davidson]
2566 We can't debate about how sceptical to be [Rorty]
3252 Scepticism relies on non-sceptical thought [Nagel]
2743 Proving knowledge impossible is self-defeating [Dancy,J]
3880 Logical positivism closes the sceptical gap [Scruton]
19559 Contextualists allow scepticism in extremes [Cohen,S]

6364 We need some beliefs to get us started [Pollock/Cruz]
3761 Externalism and relevance attack sceptics [Bernecker/Dretske]
6590 Scepticism is demanding and ineliminable [Fogelin]
19507 Sceptics lack evidence for their worry [Pritchard,D]

E. Relativism

1. Relativism

knowledge varies according to points of view

412 The sweetness of food is relative [Xenophanes]
417 Donkeys prefer chaff to gold [Heraclitus]
426 Sea-water is pure for fish and poison for us [Heraclitus]
436 Animals see beauty in their own species [Epicharmus]
3305 Relativism is a metaphysical doctrine [Benardete,JA]
1802 Individual men vary in their perceptions [Pyrrho]
1801 Animals vary in their perceptions [Pyrrho]
1803 Objects vary according to which sense we use [Pyrrho]
1804 Our current state of mind varies perception [Pyrrho]
1805 Judgements vary between cultures [Pyrrho]
1807 Perception depends on distance and angle [Pyrrho]
1808 Perception depends on the amount seen [Pyrrho]
1806 Perceptions depend on surrounding conditions [Pyrrho]
1810 Judgements depend on comparisons [Pyrrho]
1809 Perception depends on expectations [Pyrrho]
1482 Sweetness of wine depends on the taster [Epicurus]
1483 People disagree over water temperature [Epicurus]
1487 Colour depends on eye adjustment [Epicurus]
1814 Perception is always relative to something [Agrippa]
1874 Preferring human perceptions is just bias [Sext.Empiricus]
6578 Relativism may be to one possible scheme [Kant]
4423 Unproved metaphysics is needed for life [Nietzsche]
4420 Objectivity is just multiple viewpoints [Nietzsche]
4486 Only perspectives, because no true world [Nietzsche]
21942 Sociological knowledge is the problem [Foucault]
7424 Games of truth are not mere power relations [Foucault]
1547 Man is the measure of all things [Kim]
4709 Ontological relativism denies nature's joints [O'Grady]
6583 Relativism has many schemes, not Kant's one [Fogelin]

2. Knowledge as Convention

knowledge is just social convention (Gk. nomos)

1556 Nature unites people, convention divides them [Hippias]
12785 Truth is mutually agreed perception [Leibniz]
10347 Objectivity is intersubjectivity [Davidson]
4725 Knowledge is relative to a context [O'Grady]

3. Subjectivism

knowledge is entirely 'down to the individual'

431 Contrast makes good things appreciated [Heraclitus]
462 One vision is produced by both eyes [Empedocles]
3313 Relativism undermines identity [Benardete,JA]
3317 Relativism presupposes absolute identity [Benardete,JA]
585 Even a single observer has conflicting senses [Aristotle]
584 Appearances can only be true for an observer [Aristotle]
2975 I don't say honey is sweet, but it seems to be [Timon]
1878 Water's heat depends on your current state [Sext.Empiricus]
1879 Sick perceptions are as natural as healthy [Sext.Empiricus]
1880 Shameful actions seem fine if we are drunk [Sext.Empiricus]
1876 Individual pleasure suggests varied perception [Sext.Empiricus]
1877 Maybe there are qualities we can't sense [Sext.Empiricus]
3932 An object feels hotter if you are cold [Berkeley]
7541 We are more anthropomorphic than we realise [Goethe]
6579 Our worldview depends on our personality [Nietzsche]
7149 No comprehension without perspectives [Nietzsche]
7169 Is the perspectival part of the essence? [Nietzsche]
7183 'Subjective knowledge' is based on fiction [Nietzsche]
7182 Perspectives interpret a meaningless world [Nietzsche]
7133 Many different eyes, so no truth [Nietzsche]
6685 Subjectivism is individual relativism [Graham]

4. Cultural relativism

role of culture in shaping individual knowledge

1559 Thracians like tattoos, but we don't [Anon (Diss)]
1560 Lydians willingly prostitute their daughters [Anon (Diss)]
1561 Acceptability depends totally on circumstances [Anon (Diss)]
1910 Earrings for men are both shameful and noble [Sext.Empiricus]
1911 Someone might challenge apparent consensus [Sext.Empiricus]
5303 Law, morality and religion are bourgeois [Marx/Engels]
2877 Comparing moralities shows the problems [Nietzsche]

3868 Cultural relativism itself is above culture [Quine]
1490 We ought to criticise our own cultures [Nagel]
10356 Relativism concerns rationality in cultures [MacIntyre]
4934 Cultures basically name colours the same [Edelman/Tononi]
10498 Classification is not just social [Ellen]

5. Language Relativism

role of language in shaping human knowledge

3914 Language orders our experience [Whorf]
3916 Hopi focuses on events, not things [Whorf]
1634 Relativism involves two theories & translation [Quine]
4573 We can separate culture from language [Cooper,DE]
4575 It is hard to separate concepts from language [Cooper,DE]
16525 Sortal concepts fix our experience [Wiggins]
8088 The Hopi do have time concepts and words! [Devlin]

6. Relativism Critique

criticism of the idea that there are only points of view

247 God is the measure of all things [Plato]
606 The perceiving man is not the measure of all! [Aristotle]
612 Relativism says crossing eyes doubles reality [Aristotle]
335 Maybe even the gods disagree about forms [Plato]
2053 Relativists admit their own opponents right [Plato]
2054 In medicine, at least, we recognise experts [Plato]
2059 Are predictions all equal to relativists? [Plato]
20921 Expressing relativism needs determinates [Theophrastus]
576 Relativism says healthy minorities are sick [Aristotle]
7620 Thought itself presupposes truth [Putnam]
6398 Stability is needed to compare viewpoints [Davidson]
4243 Ethics extends beyond its home culture [Williams,B]
4244 Relativism can't support universal toleration [Williams,B]
2065 Wise people are 'the measure of all things' [Plato]
1550 Why not 'a pig is the measure of all things'? [Plato]
3857 Truth and reference matter, not meaning [Newton-Smith]
1577 Relativism is disease, because it kills debate [Rooschnik]
3878 Why believe someone who denies truth? [Scruton]
7066 What are texts and social constructs? [Heil]

14. Science

A. Basis of Science

1. Observation

attempt to neutrally perceive the environment

6026 Investigation needs preconceptions [Sext.Empiricus]
12109 Theory and observation are circular [Comte]
15880 Physics orders things, biology order classes [Harré]
3858 Even colour words are theory-laden [Newton-Smith]
3587 It needs theory to see electrons [Williams,M]
16851 Unobserved and unobservable are close [Lipton]
6792 How to start with theories-and-observations? [Bird]

2. Demonstration

proving physical facts by observation and reason

16647 Demonstrate properties from the essence [Aristotle]
17310 Aristotle gets asymmetry from demonstration [Aristotle]
21359 Demonstrations don't occur in his science [Leroi]
12365 Demonstration is deduction-understanding [Aristotle]
1667 Demonstration starts from primitive basics [Aristotle]
12371 Demonstration deduces from necessities [Aristotle]
10918 Understanding rests on essential features [Aristotle]
12374 The middle term gives the necessity [Aristotle]
1674 Science needs existents, axioms and attributes [Aristotle]
12148 Demonstration is explanatory proof [Aristotle]
1679 Universals are thought, particulars are senses [Aristotle]
1680 Simple demonstrations bring quicker knowledge [Aristotle]
12147 Demonstration rests on definitions [Aristotle]
12383 Definitions precede demonstration [Aristotle]
1691 Divide into primitives, then deduce attributes [Aristotle]
12309 There is no science of accidentals [Aristotle]
11386 Demonstrations require universality [Aristotle]
20779 Derive the unclear from the clear [Stoic school]
16577 Induction is open-ended, so won't demonstrate [Buridan]
19243 If inferences degrade truth, that's trouble [Peirce]
16799 Inductive inference is not proof [Lipton]
16798 Infer by see what explains the evidence [Lipton]
22110 Demonstration aims at understanding [Kretzmann/Stump]
15111 Demonstrations mirror causal order [Koslicki]
15115 The middle term explains, in a demonstration [Koslicki]

3. Experiment

deliberate isolation of one cause or effect

12117 Oscillate between causes and experiments [Bacon]
6603 Pressurise nature in order to reveal it [Bacon]
3618 Experiments distinguish between explanations [Descartes]
16944 Science is clever common sense [Quine]
15869 We present experimental results as natural [Harré]
7452 Test, adventure, diagnosis or dissection [Hacking]
2454 Truth and causation make experiment possible [Fodor]
2455 Experts & experiments enable us to believe [Fodor]
2460 Experiments need agreement on significance [Fodor]
2461 Experiments are a version of normal thought [Fodor]
22172 Astronomy can't be experimental [Okasha]
22177 Two groups in Random Control Trials [Okasha]
14351 Experiments isolate effects of dispositions [Corry]
22139 Experiments intervene, to see what happens [Boulter]

4. Prediction

predicting events as support for a theory

12738 True knowledge of nature is prediction [Leibniz]
22179 Explanations predict, and predictions explain [Hempel]
13054 Prediction with causation won't explain [Salmon]
18960 Prediction mainly aims at confirmation [Putnam]
8057 Prediction and explanation are quite separate [MacIntyre]
17087 Are explanation and prediction the same? [Ruben]
16856 Prediction impresses more than accommodation [Lipton]
16857 Predictions are best for finding explanations [Lipton]
5340 Explanation does not entail prediction [Flanagan]
17374 Prediction needs determinism [Dupré]
4807 Barometers predict but don't explain [Psillos]
4808 Past events are explained without prediction [Psillos]
6757 Explanation and prediction are related [Bird]
18698 Predictions give content, equivalence, adequacy [Button]
14915 Evolution is explanation, not prediction [Ladyman/Ross]
14916 The possibility of prediction is key [Ladyman/Ross]
17405 You can fudge both theory and observations [Scerri]
19737 We infer structure from good predictions [New Sci.]

5. Anomalies

observations which contradict current theories

165 The truth might be bad in a law court [Plato]
16860 We trust generalisation more than instances [Mill]
15881 We can treat anomalies as definitions [Harré]
3862 All theories are falsified by anomalies! [Newton-Smith]
3863 An anomaly like Uranus can lead to Neptune [Newton-Smith]
3864 Anomalies are judged by balancing alternatives [Newton-Smith]
21508 Anomalies challenge what is really basic [Bonjour]

6. Falsification

establishing that a fact or theory is not true

5862 A counterexample refutes necessary truth [Aristotle]
5629 If propositions imply falsehood they are false [Kant]
22137 Falsifiers reject a part of the theory [Duhem]
19464 Don't give up after one failure [Ayer]
22191 Scientists don't aim to falsify the paradigm [Kuhn]
18076 Most theories are continually falsified [Kuhn]
18284 The general can only be falsified [Popper]
22188 Nobel Prizes for good refutations? [Gorham]
7780 Falsification is the hallmark of science [Popper]
16830 Rejection is not only by falsification [Lipton]
6794 Nothing can falsify a statistical hypothesis [Bird]
6795 Popper quietly uses induction when necessary [Bird]
4223 Unfalsifiability is good in metaphysics [Lowe]
4644 'Some x are y' is verifiable, not falsifiable [Baggini /Fos]
22174 Newton survived the Uranus anomaly [Okasha]
22175 Science aims to confirm, not falsify [Okasha]
22189 Only ditch theories for better theories [Gorham]
22190 More informative means less probable [Gorham]
19685 Naive falsification overvalues small oddities [McGrew]
14576 No simple falsification for dispositions [Mumford/Anjum]

B. Scientific Theories

1. Scientific Theory

a generalised explanation of natural events

16971 Forms or substances unify the sciences [Aristotle]
19594 General statements about nature are not valid [Novalis]
14766 Scotus fits well with modern science [Peirce]
19225 Arrange sciences by abstraction level [Peirce]

16882 A discipline is contained in its basics [Frege]
20270 There is no one scientific method [Nietzsche]
14433 How to interpret science's equations? [Russell]
18699 Define all predicates by primitive relations? [Carnap]
4630 Two theories may work, but conflict [Quine]
21687 Clearly we must prefer simpler theories [Quine]
21688 Four reasons favour simple theories [Quine]
6809 Kuhn said scientists agree on their values [Kuhn]
15882 No one system of logic covers laws [Har r ]
4958 'Heat is molecular motion' is necessarily true [Kripke]
15286 Clavius shows syntactical theories fail [Har r /Madden]
15283 Simplicity only sorts endless theories [Har r /Madden]
15316 Powers and natures may yet explain everything [Har r /Madden]
8054 Social science lacks laws and counterexamples [MacIntyre]
3865 Does it matter whether a theory is scientific? [Newton-Smith]
17503 Theories are too abstract to represent well [Cartwright,N]
2458 Theories causally link our beliefs to reality [Fodor]
16827 Where do hypotheses come from? [Lipton]
7021 Theories themselves aren't theory-dependent [Heil]
17601 Theories aren't rationalist or empiricist [Thagard]
8457 Violate the minimum background beliefs [Orenstein]
6805 Complex relativity ousted simpler Newton [Bird]
6777 Realist theories involve truth and entities [Bird]
6804 There is no such thing as 'scientific method' [Bird]
19652 How can maths raise us above experience? [Meillassoux]
19091 Mathematical reality is just thought [Macbeth]
22182 Unobservables are underdetermined [Okasha]
22192 Is Newton's time simpler, or Einstein's? [Gorham]
22194 Structural Realism says see progress [Gorham]
22195 Is the maths crucial, and is it separate? [Gorham]
18614 Eliminate terms if they pick out varied kinds [Machery]
18615 Eliminate terms if they pick out no kind [Machery]
18616 Bad terms block improved classification [Machery]
22136 Science grew from medieval thought [Boulter]

2. Aim of Science

what science is trying to achieve, in general

21950 Science must get rid of mental idols [Bacon]
18971 Theories are practical tools for progress [James]
5391 Science seeks exceptionless uniformities [Russell]
3856 Good theory: unfalsified empirical explanation [Popper]
17508 Science aims at truth, not at 'simplicity' [Putnam]
12669 Don't just describe things; explain them [Ellis]
15225 Science studies natures and constitution [Har r /Madden]
15298 Good theories explain and predict powers [Har r /Madden]
14917 Theories just need empirical adequacy [Fraassen]
7026 Science classifies powers, ignoring qualities? [Heil]
15207 Illuminating (not coherent) theories! [Le Poidevin]
19007 Good theories are just physically true [Yablo]
14988 Try but messy theories don't explain [Sider]
17488 Laws give theory, explanations and reductions [Glennan]
20736 Science abstracts what is objective [Aho]

3. Instrumentalism

scientific truth is just what works in our theories

18982 Theories: instrumental adaptations to reality [James]
18985 Truths are valuable instruments of action [James]
7621 Special relativity was operationalist [Putnam]
13940 Judge scientific language's instrumental value [Carnap]
17665 'Tractatus' is instrumentalist about laws [Wittgenstein]
17658 We now digitise temperature [Goodman]
4713 Theories are instruments for prediction [Quine]
13067 Instrumentalism denies explanation [Salmon]
14204 Meaning change if the tests change? [Putnam]
16057 Discourse can be useful but untrue [Horgan,T]
17704 Operationalism: measurement is definition [Mares]
6778 Intrumentalist theories are prediction tools [Bird]
22197 What about theories of past and future? [Gorham]
22196 Scientists intend concepts to be true [Gorham]

4. Paradigm

set framework for understanding nature

3917 Science is a feature of certain languages [Whorf]
22183 A paradigm shift is a conversion [Kuhn]
8222 Superior concepts expand our awareness [Deleuze/Guattari]
17397 No paradigm shifts for the periodic table! [Scerr]

5. Commensurability

possibility of comparison between theories

12127 Many theories can fit the facts [Bacon]
5940 Maybe goods are comparable by incommensurable [Ross]
17650 Sciences can't be properly compared [Goodman]
6162 Descriptive reference gives incommensurability [Rowlands]
22184 Incommensurability uses theory-meaning [Kuhn]
7619 Describable notions aren't incommensurable [Putnam]
12128 Theories are incommensurable [Kuhn]
3866 Believe all the incommensurable theories! [Newton-Smith]
4732 Maybe we can understand, but not judge [O'Grady]
22185 Incommensurability blocks incompatibility [Okasha]

6. Theory Holism

theories can only be grasped as part of the whole

17546 Not one concept can be changed in Newton [Heisenberg]
18197 Experiment test hypotheses in groups [Duhem]
1625 Verify all language together, not sentences [Quine]
2561 Meanings of terms depend on whole theories [Feyerabend]

7. Scientific Models

theoretical structures aimed at mapping reality

3214 Perceptual models rather than mentalese [Johnson-Laird]
17498 Models as formal or representational [Portides]
17499 Map theory to data, to represent [Portides]
17501 Good representation is good explanation [Portides]
17502 The best models explain the most results [Portides]
17496 Models represent, idealise and abstract [Portides]
17497 Models of theory, or phenomena [Portides]

8. Ramsey Sentences

procedure to reduce metaphysical commitment in theories

6894 Mental terms can be eliminated [Ramsey]
15526 We define new terms with old ones [Lewis]
15528 We can assert a theory without exact content [Lewis]
15529 A single theory realisation is best [Lewis]
15531 Ramsey sentences say at least one realisation [Lewis]
14982 Ramsey sentences really miss something [Sider]
14921 Keep obserations, cut unobservables [Ladyman/Ross]
14922 The Ramsey approach doesn't eliminate [Ladyman/Ross]

C. Induction

1. Induction

obtaining general truth from many instances

5854 Nobody fears a disease nobody has caught [Aristotle]
12271 Induction is particular-to-universal [Aristotle]
5714 Simple facts are hard to believe at first [Lucretius]
17027 Science generalises by induction [Newton]
7446 The new idea of induction led to the problems [Hume]
16845 Causation is the basis of induction [Mill]
16843 Induction is more than Mill's methods [Mill]
8624 Induction needs supporting principles [Frege]
8626 One observation can create a high probability [Frege]
22200 Eliminate the impossible, to find truth [Conan Doyle]
16941 Induction needs causes and effects to match [Quine]
16940 Induction is just more of the same [Quine]
6955 Induction is abduction [Haman]
7369 Brains are essentially anticipation machines [Dennett]
16804 There are five accounts of induction [Lipton]
9163 Induction is infeasible, and a priori [Field,H]
6352 Enumeration universal; statistical proportions [Pollock/Cruz]
4584 Can we justify belief in uniformity of nature? [Baggini /Fosi]
15708 Induction is self-rewarding [Gelman]
16254 Induction leaps blind, lands safely [Maudlin]
18690 Induction uses types of the properties [Murphy]
14953 Induction is from observed to unobserved [Ladyman/Ross]
22176 Induction examines cases of a kind [Okasha]
18609 Psychologists' induction is linking categories [Machery]
18610 Ampliative: some got it, so all got it [Machery]
14551 Necessary causation would explain induction [Mumford/Anjum]
14571 Only basic essences give full uniformities [Mumford/Anjum]

2. Aims of Induction

possible targets for inductive thinking

1683 Many particulars reveal universals [Aristotle]
16576 Science is based on induction [Buridan]
19387 Induction is comparison of experiences [Leibniz]
2198 Expect similar effects from similar qualities [Hume]
19234 Greek induction bunches the instances [Peirce]

17631 Induction infers premises from consequences [Russell]
2941 Induction means accepting the simplest laws [Wittgenstein]
5190 Can we prove general future truths? [Ayer]
19462 Induction to particulars, or generalities [Ayer]
21748 Inductions lead to systematic methods [Quine]
3095 Induction expands explanatory coherence [Harman]
9661 Induction is good inference from observation [Lewis]
3709 Induction must explain, not just observe [Bonjour]
6775 Induction is best explanation by a law [Bird]

3. Limits of Induction

why induction cannot justify generalised truths

12293 How do we decide cases are similar? [Aristotle]
6027 Don't infer generalisations from particulars [Philodemus]
1886 Induction either fails, or is impossible [Sext.Empiricus]
5053 Induction can never establish necessity [Leibniz]
2199 Why assume the future will be like the past? [Hume]
2201 No argument can prove future is like the past [Hume]
2202 Even animals learn from experience [Hume]
2203 If many instances are needed, it must be habit [Hume]
2204 Custom, not reason, learns from experience [Hume]
19235 How does induction get started? [Peirce]
19236 Induction can never deny possible exceptions [Peirce]
19251 Don't rush to generalise a property [Peirce]
5390 Chickens are surprised when farmers kill them [Russell]
5392 Future futures may not resemble the past [Russell]
5394 Experience can't prove induction [Russell]
5191 Uniformity proving induction would be circular [Ayer]
7779 There is no such thing as induction [Popper]
17685 Induction for all Fs, abduction for the hidden [Armstrong]
13607 Induction is no good for unconnected events [Ellis]
6952 New information can defeat an induction [Harman]
15255 Explanation not conjunction supports induction [Har r /Madden]
15270 Induction is a problem if events are atomic [Har r /Madden]
16823 Induction points to low level facts [Lipton]
15694 Children overestimate single examples [Gelman]
15695 Pure categories distort induction [Gelman]
15713 n less than million+: a million confirmations! [Kaplan/Kaplan]
6790 Justifying inference to unobserved is circular [Bird]
6791 If induction fails then so does science [Bird]
19668 Will our science still be valid tomorrow? [Meillassoux]
7295 Induction is only reliable for stable reality [Mitchell,A]
14570 Nature is not completely uniform [Mumford/Anjum]

4. Reason in Induction

role of pure reason in inductive inference

3033 Induction uses resemblance to link truths [Diog. Laertius]
6350 Premises can support without entailing [Pollock/Cruz]
3598 Hume just shows induction isn't deduction [Williams,M]
3860 Without induction science is irrational [Newton-Smith]
13055 Good induction needs no available defeaters [Salmon]
6953 All reasoning is inductive [Harman]
3251 Regularities are evidence of hidden necessity [Nagel]
16800 Induction is underdetermined, by definition [Lipton]
16858 For believers, induction supports induction [Lipton]
4811 Induction is non-monotonic, unlike deduction [Psillos]
4583 Is good induction bad deduction? [Baggini /Fosi]
14914 Induction from induction is not vicious [Ladyman/Ross]

5. Paradoxes of Induction

logical problems with the process of induction

a. Grue problem

18749 Confirmation can never be formalised? [Goodman]
17646 Formally, there are no sound inductions [Goodman]
17655 Grue and green won't be in the same world [Goodman]
16933 Grue reveals problems with similarity [Quine]
17675 'Grue' involves a time and a change [Armstrong]
17683 'Grue' is not a single universal [Armstrong]
5485 Emeralds are intrinsically green [Ellis]
15887 'Grue' proposes colour-change in gems [Har r ]
15888 'Grue' proves kinds are crucial [Har r ]
8556 Grueness has no causal potential [Shoemaker]
15096 Grue derives it features from green [Shoemaker]
9652 It is irrational to expect grue emeralds [Lewis]
4783 Prediction depends on arbitrary predicates [Mautner]
3760 Prediction based on words is arbitrary [Bernecker/Dretske]
14989 Gruesome predicates don't joint-carve [Sider]
14997 Being 'grue' won't ensure similarity [Sider]

6738 Any conclusion can be drawn if we allow 'grue' [Bird]
6739 Same evidence for deciduous and evergreen [Bird]
6799 Grue shows laws and natural kinds as circular [Bird]
7296 'Grue' is not a colour [Milsted]

b. Raven paradox

19000 'All Rs are black' is about Rs, not implication [Belnap]
17674 Confirm $Rx.Bx \vee \neg Rx.Bx \vee \neg Rx.$ 'Bx !' [Armstrong]
15889 Colour matters if ravens are birds [Harré]
15890 Test presuppositions in 'All ravens are black' [Harré]
15284 Equivalent in truth, or in nature? [Harré/Madden]
15285 Contraposition invokes a different 'cluster' [Harré/Madden]
15287 Only lawlike if there is a mechanism [Harré/Madden]
16832 Maybe ravens are essentially black [Lipton]
16836 Shoes aren't white by being non-ravens [Lipton]
16831 What explains ravens won't explain shoes [Lipton]
16833 Non-black non-ravens aren't testable [Lipton]
16834 Picking contrast cases needs a theory [Lipton]
4782 Irrelevant observations can logically confirm [Mautner]
18993 Different evidence means different meaning [Yablo]
19003 Most people accept the paradox [Yablo]
7006 Irrelevancies support contradictory inductions [Schofield,J]

6. Bayes's Theorem

equation showing probability of an inductive truth

14280 First prob x second prob assuming first [Bayes]
19143 Ramsey gave axioms for preference [Ramsey]
19155 Propositions, not gambles, as Bayes targets? [Jeffrey]
2751 Probability must be relative to some evidence [Dancy,J]
2798 Have degrees of belief, tracking probability [Horwich]
2799 Surprise predictions give better confirmation [Horwich]
16803 Any consequence will confirm a hypothesis? [Lipton]
16801 Confirmation is the unlikely coming true [Lipton]
16802 Past evidence is certainly true [Lipton]
16837 Bayes has its own vocabulary [Lipton]
16839 The Bayes approach may need explanation [Lipton]
6372 Tautologies are certain, so must be believed [Pollock/Cruz]
17600 Bayesians must rely on approximations [Thagard]
14990 Bayes: weird output if weird input [Sider]
6798 Can Bayesianism solve the induction problems? [Bird]
22178 Rational change, but crazy starting point? [Okasha]
17943 Bayes needs beliefs, not frequency ratios [Colyvan]

D. Explanation

1. Explanation

overview ideas about the nature of explanation

a. Explanation

11243 Aristotelian explanations are facts [Aristotle]
12367 Universals remote; particulars near [Aristotle]
12380 Universals clarify explanations [Aristotle]
12385 Particulars or universals explain particulars? [Aristotle]
11385 Principles: non-primary, or unknowable [Aristotle]
21473 All explanation rests on the inexplicable [Schopenhauer]
17086 Explanation transcends experience [Mill]
15831 Explanations use states of affairs [Chisholm]
8347 Explanations relate statements, not events [Davidson]
14470 Only one complete explanation is possible [Kim]
11951 Interpolation and extrapolation are acceptable [Molnar]
17081 Explanation as information, or as an act? [Ruben]
16850 Induction is explanatory, but is it true? [Lipton]
15005 Explanations must cite generalisations [Sider]
15692 People accept shallow explanations [Gelman]
6752 Components of explanations are objective [Bird]
6754 Both people and facts explain things [Bird]
17324 'Because' is inference or explanation [Liggins]

b. Aims of explanation

17085 Explanations rule out their opposites [Plato]
5080 Aim at causes, principles and elements [Aristotle]
1686 We seek facts, reasons, existence and class [Aristotle]
1689 Explain existence, necessity, source & purpose [Aristotle]
11289 Understanding approaches intelligibility [Aristotle]
16736 Deduce things from what is better known [Boyle]
7139 Explanation is clarifying succession of things [Nietzsche]
13048 Explain exactly, fruitfully, simply, similarly [Carnap]
18720 To understand, reveal the multiplicity [Wittgenstein]
18721 Explanation and understanding are the same [Wittgenstein]
21507 Explanation wants unified underlying structure [Hempel]

13046 Unfamiliar to familiar isn't explanation [Salmon]
13058 Why for evidence, or why for explanation [Salmon]
15306 Only changes require explanation [Harré/Madden]
12314 Explanation as relative or informational? [Stanford]
12313 Five motives for explanation [Stanford]
15559 The aim of understanding is too obvious [Lewis]
16807 Explanations give reasons for phenomena [Lipton]
16808 Explanations make things familiar to us [Lipton]
16806 Knowledge plus explanation gives understanding [Lipton]
16822 Explanations reveal structures [Lipton]
6517 Order seems to demand an explanation [Robinson,H]
6515 Improbable things need explanations [Robinson,H]
9487 No regress thwarts all explanations [Bird]
17393 Science wants to explain patterns [Scerri]
17317 Good explanations reveal dependence [Koslicki]

c. Direction of explanation

17077 Flagpole height could be fixed by the shadow [Smart]
17078 Expansion explains red shift, not vice versa [Smart]
15293 Explanation by logic lacks a direction [Harré/Madden]
15294 Powers can explain causal direction [Harré/Madden]
17092 For explanation, the world needs a structure [Ruben]
8968 Causal explanation must have one direction [Lowe]

d. Explaining people

5436 Sciences explain, humanities understand [Dilthey]
7082 Explain nature, but only clarify society [Weber]
4193 Explain people rationally, not causally [Lowe]

2. Types of Explanation

various ways in which explanation might be achieved

a. Types of explanation

11250 There are four types of explanation [Aristotle]
12045 The four 'causes' are explanations [Aristotle]
16968 Explanations are the answers to 'why?' [Aristotle]
16969 Four types of answer to the question Why? [Aristotle]
3320 All theories place things in general groups [Aristotle]
11246 Explanations assign natural kinds [Aristotle]
13297 Plato's fifth cause is the underlying idea [Seneca]
12913 Explanation of nature rests on metaphysics [Leibniz]
21917 Explain objects, concepts, maths, ethics [Schopenhauer]
17897 Explain whole by parts, or parts by the whole [Belnap]
14366 Explanations are tables of statistics [Salmon]
13050 Are all scientific explanations arguments? [Salmon]
13059 Explain by facts, or reports of facts [Salmon]
13064 Modal, epistemic and ontic explanations [Salmon]
17672 A reason for P isn't its explanation [Armstrong]
19061 Deductive explanation often begs the question [Dummett]
7459 Necessity - maths, contingency - jurisprudence [Hacking]
16182 Explain by causes, or by theory [Cartwright,N]
17090 Explanations are sentences, not arguments [Ruben]
18222 There's always an intrinsic explanation [Field,H]
17271 Is there a distinct metaphysical explanation [Fine,K]
17291 Explain by identity, or by truth [Fine,K]
14319 Structural explanations seek mechanisms [Mumford]
4812 Explain by prediction, necessity or causes [Psillos]
6750 There are six types of explanation [Bird]
20043 Evolutionary explanation uses past, or groups [Stout,R]
17321 There are various non-causal dependencies [Liggins]
17323 Determinative explanation tracks dependence [Liggins]
17298 An identity is not an explanation [Audi,P]
17319 Conceptual explanations rest on complexity [Schnieder]
19018 Explanations by disposition are more stable [Vetter]
19020 Grounding is a kind of explanation [Vetter]

b. Contrastive explanations

16816 Contrastive explanation: why fact, not foil? [Lipton]
16826 A good 'foil' narrow the possibilities [Lipton]
6761 Contrastive explanations pick one out [Bird]
17308 Emphasis demands a particular contrast [Schaffer,J]

c. Explanations by coherence

17061 Explanation is fitting into a belief system [Smart]
17074 Bad explanations by fit, or background? [Smart]
17076 Deducing from laws does achieve coherence [Smart]
13597 Good explanations unify [Ellis]
16184 Explanation: model bridging theory and reality [Cartwright,N]
16811 Explanation unifies effects with theories [Lipton]
13071 Order of being goes beyond causation [Cover/O'Leary-Hawthorne]
17064 1: Coherence is symmetrical [Thagard]

17065 2: All parts of an explanation must cohere [Thagard]
17066 3: Explanatory analogies imply coherence [Thagard]
17067 4: Observation is intrinsically reliable [Thagard]
17068 5: Contradictory propositions incohere [Thagard]
17069 6: Acceptability depends on coherence [Thagard]
14913 Explanation derives properties from theory [Ladyman/Ross]

d. Consilience

20643 Consilience is shared explanatory grounds [Whewell]
17071 Consilient explanations are better [Smart]
22193 Consilience supports truth [Gorham]

e. Lawlike explanations

13109 Chance is inexplicable, lacking regularities [Aristotle]
12357 Explanation and generality are linked [Aristotle]
15282 Prefer simplicity and deducibility [Oslander]
12107 Positivism links observation to generality [Comte]
17091 Explanations fit facts into patterns [Mill]
17550 Mathematics is used to clarify nature [Heisenberg]
17673 That laws explain nature is an illusion [Wittgenstein]
6755 Explanations involve laws and conditions [Hempel]
17083 Covering-law modes aren't meant for history [Hempel]
13049 Laws explain, generalisations don't [Salmon]
13051 Explanations predict, predictions explain [Salmon]
13053 Explanations need information, not laws [Salmon]
17684 Explanation by regularity laws is circular [Armstrong]
15556 Pursue general explanations, not laws? [Lewis]
16167 The laws must be modified for explanations [Cartwright,N]
16169 Laws cover separate domains, not reality [Cartwright,N]
16171 The law view assumes a 'right' explanatin [Cartwright,N]
16176 Do falling barometers explain storms? [Cartwright,N]
16177 There isn't a law to cover every single case [Cartwright,N]
16180 Uniformities don't explain events [Cartwright,N]
16810 Deduction explanation is too easy [Lipton]
16809 Explanations can be good without laws [Lipton]
16829 Explaining, not logic, is the criterion [Lipton]
16563 Explanation is what sustains the regularity [Machamer/Darden/Cr]
14342 Laws depend on particulars, not vice versa [Mumford]
4802 Explanation needs laws as well as causes [Psillos]
4804 Only a law can explain one event [Psillos]
4805 Law explanation of shadows is reversible [Psillos]
16245 Laws should help explain what they cover [Maudlin]
6758 A good explanation competes with others [Bird]
6759 Livers accompany but don't explain hearts [Bird]
13229 Maybe general proofs are more explanatory [Steiner,M]
12790 Only the invariant generalisations explain [Leuridan]
14569 Does only entailment give full explanation? [Mumford/Anjum]
17939 Maths can reveal structural similarity [Colyvan]

f. Necessity in explanations

4312 Understanding means a grasp of necessity [Spinoza]
5484 We can infer from essences, not instances [Ellis]
15558 Good explanations reveal necessity? [Lewis]
16812 Explanations show the necessity of effects [Lipton]
17938 Maths can prove surprises must happen [Colyvan]

g. Causal explanations

20892 Causal explanations are the great aim [Democritus]
15859 To study causes, study what is best [Plato]
1669 The cause of our love is loved the most [Aristotle]
13165 Geometry proofs don't show causes [Proclus]
17238 Science should show the causes of things [Hobbes]
17022 Admit the minimal causes that explain [Newton]
17021 Same effects have same causes [Newton]
19398 Teleology for mind; efficient cause for body [Leibniz]
16805 Infer from Agreements or Differences [Mill]
17062 Causal explanation rules out the mathematical [Smart]
13052 Explanations don't need causation [Hempel]
13061 Flagpoles explain by preceding shadows [Salmon]
4809 Singular events must be explained causally [Lewis]
9658 Explanations give us causes [Lewis]
16280 Explanation often wants laws, not causes [Lewis]
14321 Explanations are facts about causal history [Lewis]
17094 There are non-causal determinations [Ruben]
16813 Casual history or mechanism is what explains [Lipton]
16815 Explanations in maths are not causal [Lipton]
16846 A cause may not be an explanation [Lipton]
16848 Manipulation gives clear causal inference [Lipton]
16849 Explanations are easier than causes [Lipton]

8406 All explanation implies causal explanation [Sanford]
 4395 Explanation in maths is non-causal [Psillos]
 4806 Causes can explain without laws [Psillos]
 13929 Natural explanations give causal links [Haslanger]
 14367 Explanations are causal graphs [Woodward,J]
 20058 Not all explanation is causal [Stout,R]
 15144 Explanation may involve lack of causal essence [Chakravartty]
 15117 In Greek, cause and explanation are the same [Koslicki]
 17299 Many explanations are non-causal [Audi,P]

h. Explanations by function

12755 Final cause helps physics explanation [Leibniz]
 13195 Use, as well as parts, explains a house [Leibniz]
 16555 Function is activity, not a property [Machamer/Darden/Craver]
 12789 Dispositional or causal functions in biology [Leuridan]

i. Explanations by mechanism

16560 Galileo introduced mechanical explanation [Galileo]
 15960 Explanation deduces from the better known [Boyle]
 18716 Machines express a rule of movement [Wittgenstein]
 17093 To understand the world, study mechanisms [Salmon]
 17492 Mechanisms can be non-regular, sans systems [Glennan]
 13045 Quantum explanations will be by mechanism [Salmon]
 13062 Does the first occurrence have a function? [Salmon]
 13063 Explanations reveal mechanisms [Salmon]
 16557 Mechanisms are processes and interactions [Salmon]
 13601 Particular events lack essential explanations [Ellis]
 15885 No mechanism for Newton's 1st Law [Harré]
 15254 Natures reveal powers, relations, behaviour [Harré/Madden]
 15317 Powers and natures imply mechanisms [Harré/Madden]
 16842 We want to know how causes work [Lipton]
 16528 Mechanisms are not just push-pull systems [Machamer/Darden/C]
 16530 Mechanisms show how, which explains [Machamer/Darden/Crav]
 16529 Mechanisms produce regular change [Machamer/Darden/Craver]
 16553 Mechanisms combine entities and activities [Machamer/Darden/C]
 16559 Mechanism explanation has a bottom level [Machamer/Darden/C]
 17493 Modern mechanism need parts and diagrams [Glennan]
 17489 Mechanisms as parts, or as processes [Glennan]
 17487 Mechanism replaces empirical laws [Glennan]
 17490 Movement of bits explains everything? [Glennan]
 17491 Mechanistic explanation permits exceptions [Glennan]
 17500 Mechanism is too specific for theories [Portides]
 14384 Mechanisms are not basic to explanation [Leuridan]
 12787 Mechanisms need regularity models [Leuridan]
 14386 Mechanisms depend on regularities [Leuridan]
 14388 Mechanisms must rest on micro-regularities [Leuridan]
 14568 Structures need powers to explain things [Mumford/Anjum]
 17471 Mechanism explanation began in chemistry [Weisberg/Needham]
 17472 Thick mechanisms for whole, thin for steps [Weisberg/Needham/I]

j. Explanations by reduction

16619 We only infer substances beneath qualities [Gassendi]
 15308 Sciences aims to simplify forces and powers [Kant]
 6552 Large properties disappear at low levels [Heisenberg]
 20653 Groups,lives,cells,molecules,atoms,particles [Putnam/Oppenheim]
 17075 Reduction is often to the unfamiliar [Smart]
 15310 Solidity and shape come from powers [Harré/Madden]
 12315 Explain by causes, or by constitution [Stanford]
 17088 Reducing one science to another is ideal [Ruben]
 2396 Not all explanations are reductive [Chalmers]
 15059 Grounding must be a good explanation [Fine,K]
 7060 Explanation can be by decomposition [Heil]
 13926 Best explanations need persistents as grounds [Haslanger]
 11053 The strongest reduction is explanatory [Hanna]

k. Explanations by essence

15119 Essentialist explanation needs many essences [Aristotle]
 12000 Essences explain other properties [Aristotle]
 16646 Geometry needs the essence of lines [Aristotle]
 11384 Knowledge is of 'what', not just qualities [Aristotle]
 16105 We know a thing when we grasp its essence [Aristotle]
 16135 Real enquiry seeks causal essence [Aristotle]
 11296 Form and substance explain everything [Aristotle]
 11999 Explanation is by shared properties [Aristotle]
 11198 Definition of essence explains things [Aquinas]
 16784 Pure form or arrangement explains properties [Arnauld,A/Nicole,F]
 13073 Only essences will explain properties [Spinoza]
 17026 I don't know why gravity has its properties [Newton]
 16037 Essence for science, substratum for being? [Locke]

16032 Locke avoids real essences for explanation [Locke]
 12519 Real essence causes obvious properties [Locke]
 13089 Subjects explain predicates and events [Leibniz]
 12729 Cause is the reason for change [Leibniz]
 13092 Essences is a law of change [Leibniz]
 12977 Deeper understanding will link definitions [Leibniz]
 13569 Essentialist explanation needs natural kinds [Ellis]
 15975 Can a few properties explain the rest? [Alexander,P]
 15219 Essence explains both capacity and power [Harré/Madden]
 11995 Explanation by properties runs out [Kung]
 11996 Non-essentials may explain more [Kung]
 12064 Epistemology needs 'substance' [Wiggins]
 12049 Secondary substance is informative [Wiggins]
 11848 'What is it?' points to persistence [Wiggins]
 14322 'Fragile' is unlikely to explain breakages [Mumford]
 17481 Nuclear charge explains atoms [Hendry]
 11905 Explanatory non-necessary essences? [Mackie,P]
 15114 Thunder's essence explains its actions [Koslicki]
 15710 Quantum atoms explain the periodic table [Kumar]
 16783 Essence is only inferred if it explains [Pasnau]
 16975 Essences explain kinds, modality and powers [Tahko]

l. Probabilistic explanations

13056 We need relevance, not high probability [Salmon]
 13057 Probability is propensity, not frequency [Salmon]
 13060 Can unlikely events be explained? [Salmon]
 16274 An explanation might increase the surprise [Lewis]
 16840 To maximise probability, don't speculate [Lipton]
 6756 Some explanation increases the likelihood [Bird]
 6760 Increased probability is not explanation [Bird]

m. Explanation by proof

13231 Proof based on a characteristic is explanatory [Steiner,M]
 17933 Reductio proofs fail to explain [Colyvan]
 17934 Proof by exhaustion is unexplanatory [Colyvan]
 17935 Induction is structural, so explanatory [Colyvan]
 17942 Can a real proof baffle everyone? [Colyvan]

3. Best Explanation

deciding why one explanation is superior to others

a. Best explanation

1678 Universals offer the best explanations [Aristotle]
 13158 Only Copernicus offers a good explanation [Leibniz]
 16835 Difference and Agreement are IBE [Mill]
 16861 Natural selection explains far more [Darwin]
 14790 'Abduction' is preferring one explanation [Peirce]
 14791 Abduction involves original suggestions [Peirce]
 5363 Presumably cats are continuous objects [Russell]
 5367 Belief in reality makes sense of experience [Russell]
 18713 Good explanation is good future usage [Wittgenstein]
 17676 Least explanations of the most are the best [Armstrong]
 17060 Best Explanation is key to epistemology [Harman]
 16824 IBE just infers the likeliest cause? [Lipton]
 16817 IBE is a guide to inference [Lipton]
 16818 'Likeliest' explanation, or the 'loveliest'? [Lipton]
 16819 Infer actuals from potential bests [Lipton]
 16820 Aim to link truth with understanding [Lipton]
 16828 IBE needs data search, and is not passive [Lipton]
 16844 Contrasts cause if they explain best [Lipton]
 16853 Explanation guides choice of explanations [Lipton]
 3232 Abduction is best explanation using wide data [Rey]
 6360 Science confirmation is best seen as abduction [Pollock/Cruz]
 17599 The best theory is the most probable? [Thagard]
 4634 Simple, testable, coherent, comprehensive [Baggini /Fos]
 4637 To check 'best' explanation, try others [Baggini /Fos]
 6785 Abduction is factual, so must be realist [Bird]
 17403 The Periodic table rates accommodation highest [Scerri]

b. Ultimate explanation

16737 Best explanations reach the basics [Boyle]
 12737 Efficient and final causes both fully explain [Leibniz]
 14873 We treat good explanations as ultimate [Nietzsche]
 12176 There are no final explanations [Popper]
 3128 Why must explanation come to an end? [Rey]
 15057 Ultimate explanations are grounds of truths [Fine,K]
 16564 There are four basic explanatory mechanisms [Machamer/Darden]
 14320 Structureless particles end explanation [Mumford]
 14337 Use dispositions, not laws, for explanations? [Mumford]
 14343 Every explanation must stop in a disposition [Mumford]

15011 The ultimate is more than just entities [Sider]
 14389 Mechanisms and regularities all the way down? [Leuridan]

c. Against best explanation

21386 We may have to accept several explanations [Epicurus]
 6784 We haven't thought of all the explanations [Fraassen]
 12769 Best explanation has hidden values [Fraassen]
 16183 Science best explanations are often false [Cartwright,N]
 16821 One explanation? All data relevant? [Lipton]
 16838 IBE gradually leads to incoherence? [Lipton]
 16855 The best theory is usually boring [Lipton]
 16852 Truth guides explanation, not vice versa? [Lipton]
 3113 Good explanations may not be true [Segal]
 6787 Best explanation is too subjective [Bird]
 6788 Maybe bad explanations are true ones? [Bird]

4. Explanation Doubts

critical responses to attempts to give real explanations

a. Explanation as pragmatic

15492 Explanations are entirely pragmatic [Martin,CB]
 17084 Explanations must be judged pragmatically [Putnam]
 13066 Explanation is information as answer [Fraassen]
 12768 Theories are accepted without truth [Fraassen]
 17089 Facts explain facts - when named correctly [Ruben]
 14324 Explanation contains nothing objective [Mumford]
 4404 Explanation depends totally on the questioner [Psillos]
 4803 Explanations remove surprise [Psillos]
 6751 Is explanation too subjective to be science? [Bird]

b. Rejecting explanation

19222 We invent reasons to satisfy curiosity [Peirce]
 18323 We accept explanations for their pleasure [Nietzsche]

15. Nature of Minds

A. Nature of Mind

1. Mind

generalised ideas about the mind

a. Mind

13256 Nous is the finest and purest thing [Anaxagoras]
 4833 The mind is the idea of the body [Spinoza]
 3960 There are no minds, only mental properties [Davidson]
 2553 Reject properties to ditch mind-body problems [Rorty]
 4969 I find the mind-body problem confusing! [Kripke]
 3295 Why am I anyone in particular? [Nagel]
 11936 Minds as intentional, or conscious? [Molnar]

b. Purpose of mind

16198 Knowledge is the essence of the mind [Spinoza]
 5034 Mind is a thinking substance [Leibniz]
 7131 Intellect and senses simplify everything [Nietzsche]
 21949 Minds need worldly engagement [Heidegger]
 3995 A mind is an organ of representation [Lewis]
 2503 Is mind just an image of the world's patterns? [Fodor]
 2508 Presumably the mind evolved to think with [Fodor]

c. Features of mind

13784 Mind is pure, and rules, orders and extends [Anaxagoras]
 1714 Mind moves, perceives, and is incorporeal [Aristotle]
 20809 Soul has senses, seeds, speech and reason [Stoic school]
 18453 Thinker and thought are one thing [Porphyry]
 17196 The will is a judge, not a desire [Spinoza]
 17198 Will and intellect are the same thing [Spinoza]
 17201 Will is finite, but intellect is infinite [Spinoza]
 8648 There aren't distances between ideas [Frege]
 2550 Mind is neither intentional nor phenomenal [Rorty]
 3368 Mind consists of qualities and intentionality [Kim]
 12636 Mental states have causal powers [Fodor]
 6152 Minds have at least 8 distinct features [Rowlands]

d. Location of mind

5987 Alcmaeon said thinking is in the brain [Alcmaeon]
 5718 The mind is in the middle of the breast [Lucretius]
 5717 The mind is as much part of man as a foot is [Lucretius]
 6003 Experiments prove brain controls body [Galen]
 18462 Soul is within body, but unlocated [Porphyry]
 6261 Head injuries prove soul is in the brain [Montaigne]
 21840 Man is deteriorated in meetings [Deleuze]
 5802 The mind is not in the head [Dretske]
 6641 Externalists say minds depend on environment [Lowe]

e. Questions about mind

2096 The mind's function is control and planning [Plato]
4608 There are four levels of possible mind [Dennett]
2994 Contents of thought have to be represented [Fodor]
2443 Intentionality, information & computation mix [Fodor]
7852 (Token) identity, realization or supervenience [Papineau]
3136 Either reductionism, dualism or eliminativism [Rey]
4610 Mind problems: quality, content, and science [Heil]
2534 Ghosts and Zombies show the dualism problem [Sturgeon]
2537 Are mental and physical types/tokens distinct? [Sturgeon]
6617 Is mind separate, and is it unique? [Lowe]

2. Psuchê

Greek concept of the mind/soul/life

5882 Soul is atoms brought together in collision [Democritus]
6034 Reason in the chest, the rest spread around [Democritus]
20912 The soul is the same as the mind [Democritus]
13781 Soul causes the body to live and breathe [Plato]
6009 Appetite is close to the body and reason not [Plato]
6041 The mind has reason, spirit and appetite [Plato]
9296 The soul is self-motion [Plato]
5962 The soul is ordered by number [Plato]
21260 'Self-generating motion' defines soul [Plato]
5880 Xenocrates held that soul is number [Xenocrates]
5146 Nourishment implies a vegetative soul [Aristotle]
5147 The soul can be obedient, or in harmony [Aristotle]
5148 We try to influence people's souls [Aristotle]
5232 Appetite can even drive out reason [Aristotle]
5507 We each have several souls [Aristotle]
12086 Psuche is form and actuality [Aristotle]
16754 Soul is movement, essence and purpose [Aristotle]
14041 Soul is like hot breath in the body [Epicurus]
6035 Soul is made of four different stuffs [Epicurus]
14526 Soul has rational and non-rational parts [Epicurus]
5879 The physical location of soul is disputed [Cicero]
5959 Some say the soul is light [Plutarch]
5960 The soul is part of god [Plutarch]
8006 Aristotle's soul is, roughly, personality [MacIntyre]

3. Mental Causation

way in which thought causes events

4862 Does mind or body move the pineal gland? [Spinoza]
5606 Freedom and natural necessity do not conflict [Kant]
2622 Dualists claim two causes of physical movement [Ryle]
3392 Mind only matters because of its causation [Kim]
3397 Beliefs are caused by other beliefs [Kim]
3396 Experiments require mental causation [Kim]
2318 Causation is our central belief about mind [Kim]
4887 Cause events by causing thoughts [Perry]
7864 Maybe overdetermination is true [Papineau]
6120 Externalism thwarts mental causation [Mellor/Crane]
5346 Mental causes as collisions seems wrong [Flanagan]
4618 If matter makes mind, all causes are material [Heil]

4. Other Minds

problem of knowing other consciousnesses

a. Other minds

8232 Feel the consciousnesses of others [Anon (Cent)]
22020 Self-consciousness implies other minds [Fichte]
8218 Other people are possible worlds [Deleuze/Guattari]

b. Scepticism of other minds

1799 The mind of Pyrrho is too private to be known [Theodosius]
7125 Consciousness can't grasp other consciousness [Sartre]
7122 The Ego is in principle impenetrable to others [Sartre]
5177 Empiricists can say nothing of other minds [Ayer]
5662 No induction can prove something unobservable [Ayer]
8866 Are other minds quite unlike my own? [Davidson]

c. Knowing other minds

3850 We discover other selves in the Cogito [Sartre]
12551 Behaviour proves other minds [Locke]
6736 We know other minds as explaining ideas [Berkeley]
3948 Experience shows other minds exist [Berkeley]
22221 Other minds are known, and inaccessible [Husserl]
21228 Monads are linked, through empathy [Husserl]
5364 Speaking humans are obviously thinking [Russell]
6416 Realism supports belief in other minds [Russell]
22222 Dasein finds itself already amongs others [Heidegger]
8136 Interaction with others guarantees Dasein [Heidegger]

19273 Other minds is an attitude, not an opinion [Wittgenstein]
5178 By definition behaviour proves consciousness [Ayer]
5167 Adopt behaviourism about other minds [Ayer]
5328 Introspection and other minds conflict [Ayer]
5330 Physicalism makes other minds observable [Ayer]
2613 The theory of other minds has no rival [Ayer]
10346 Other minds need my mind and the world [Davidson]
3463 We don't have a 'theory' of other minds [Searle]
7873 Kids perceive others' false beliefs [Papineau]
7874 Other minds by simulation, or by theory? [Papineau]

d. Other minds by analogy

3537 Analogy with myself reveals other minds [Mill]
5379 We only know others' minds from our own [Russell]
5663 We can't infer other people's pain from ours [Wittgenstein]
19272 Judging your pain by mine is hard [Wittgenstein]
14644 My pain seems unique to me [Malcolm]
9282 Self-ascribing consciousness implies others [Strawson,P]
15495 We try food if others relish it! [Martin,CB]
3457 Infer other minds by abduction not analogy [Searle]
2757 The analogy argument is a one-case induction [Dancy,J]
2758 Analogy treats mind as separate but knowable [Dancy,J]
7091 Analogy won't prove a robot conscious [Grayling]
3538 Analogy to other minds has insufficient basis [Maslin]

5. Unity of Mind

unified character of the thinking mind

2127 Resisting thirst reveals parts of the mind [Plato]
1737 The soul has an infinity of different parts [Aristotle]
5145 Are parts of the soul separate, or not? [Aristotle]
1717 If soul is corporeal it has many locations [Aristotle]
1721 If soul isn't one thing what unites its parts? [Aristotle]
21387 The parts of a mind cannot be distinguished [Lucretius]
5884 How does one mind have varied sensations? [Cicero]
5887 The soul is united, and so cannot perish [Cicero]
5506 Soul would be in parts if it was physical [Plotinus]
2302 One mind performs all our mental acts [Descartes]
21805 The mind is just a bundle of ideas [Spinoza]
5045 No unified Self in a mere machine [Leibniz]
1356 It makes no sense to be partially a person [Reid]
7152 In protoplasm, and the soul, $\frac{1}{2}+\frac{1}{2}=2$ [Nietzsche]
7130 Unity is in organisms, not minds [Nietzsche]
4536 Consciousness is not a united entity [Nietzsche]
7108 Eternal truths unite thinking minds [Sartre]
3480 Unity is both instantaneous and temporal [Searle]
5792 How do we 'bind' mental events into a unity? [Searle]
2957 Maybe unity of mind isn't all-or-nothing [Nagel]
2426 How do lots of neurons give smooth experience? [Chalmers]
4924 The mind reunifies itself after brain damage [Edelman/Tononi]

6. Anti-Individualism

individuation of minds must also refer to externals

1735 In a way there's only thinking perceiving soul [Aristotle]
22164 Grasping by Dasein makes it external [Heidegger]
12602 No border between inner and outer [Harman]
12603 We need world to explain mind [Harman]
8126 Individuating minds needs the environment [Burge]
8127 Broad concepts extend the mind outwards [Burge]
6176 External mechanisms can be cognitive [Clark/Chalmers]
19741 Externals that could be internal are mind [Clark/Chalmers]
19742 Cognition, but no consciousness, is extended [Clark/Chalmers]
6173 Externalism denies privileged access [Rowlands]
6174 Others can know your thoughts better than you [Rowlands]

7. Animal Minds

whether animals have consciousness and reason

20916 Animals have a share of reason [Democritus]
1875 Dogs use logic in choosing a road to follow [Chrysippus]
3615 Animals without speech have no reason at all [Descartes]
17204 Animals are often wiser than people [Spinoza]
12483 Animals cannot entertain general ideas [Locke]
5032 Animals have soul, but not consciousness [Leibniz]
5054 Animal thought is imagination, not reason [Leibniz]
5061 Animals see links of facts, but not causes [Leibniz]
6713 Animals have ideas, so they have reason [Berkeley]
19220 Animals rarely make mistakes! [Peirce]
4908 No one knows if animals are conscious [Carter,R]

8. Brain

philosophically interesting features of the brain

20914 The directive centre is in the whole head [Democritus]
13154 Do we think with blood, or with brain? [Plato]
7882 Dualist concepts hamper our brain research [Papineau]
2952 The cortex contains 3 x 10-to-14th junctions [Lockwood]
4902 There is no pain centre in the brain [Carter,R]
4904 Brain at seven weeks; all neurons by birth [Carter,R]
4915 Big primate social groups produce big brains [Carter,R]
4932 Conscious states last 100 milliseconds [Edelman/Tononi]

B. Features of Minds

1. Consciousness

phenomenon of vivid awareness within brains

a. Consciousness

7995 Krishna is human consciousness [Anon (Bhag)]
19354 Leibniz gave consciousness degrees [Leibniz]
4166 Consciousness only exists with an object [Schopenhauer]
5277 Life determines consciousness [Marx/Engels]
19626 Consciousness had to marginalise instincts! [Cioran]
21941 Explain thought internally, non-consciously [Foucault]
5786 A system either is or isn't conscious [Searle]
5794 Consciousness only exists subjectively [Searle]
5795 There are not two types of consciousness [Searle]
4884 Brain states in head, pain in the hand [Perry]
7367 With no one looking, no filling in is needed [Dennett]
7393 The conscious/unconscious line is blurred [Dennett]
4880 Sentience comes in degrees [Dennett]
2528 The concept of consciousness comes first [Dennett]
7854 Our phenomenal concepts are too vague [Papineau]
7889 Our concept of consciousness is very crude [Papineau]
7891 Cats 'conscious'? Question too vague [Papineau]
4621 Mental states have qualities; everything has! [Heil]
6668 Consciousness is memory of immediate past [Marshall]

b. Essence of consciousness

5014 Imagination and sensation are unnecessary [Descartes]
20741 Consciousness is shaped dialectically [Hegel]
22212 Consciousness is a system of Being [Husserl]
6151 Mind is directedness to externals [Sartre]
7437 Quality experience is not consciousness [Armstrong]
21890 Time is the key to consciousness [Derrida]
3479 Consciousness is not experienced as spatial [Searle]
3286 Consciousness must involve experience [Nagel]
9319 Which first, self-awareness or consciousness? [Gulick]
2391 We can be unconsciously aware of things [Chalmers]
4931 Consciousness a process, not thing or property [Edelman/Tononi]

c. Parts of consciousness

19438 Experience is made of tiny unconscious bits [Leibniz]
21770 Consciousness is of objects, and of itself [Hegel]
2525 Language is crucial to consciousness [Dennett]
5001 Let's unify intentionality and qualia [Kirk,R]
4917 Consciousness has five components [Carter,R]
6626 'Phenomenal' and 'apperceptive' consciousness [Lowe]
4923 Mind is private, unified, informative [Edelman/Tononi]

d. Purpose of consciousness

17212 To understand is the absolute virtue of mind [Spinoza]
20115 None of our thinkng needs consciousness [Nietzsche]
20117 Communication needs make consciousness [Nietzsche]
7155 The extent of consciousness is its usefulness [Nietzsche]
7143 Consciousness is just a tool [Nietzsche]
5809 Consciousness is not always a benefit [Dretske]
3470 Consciousness seems to aid discrimination [Searle]
4271 Mental explanation requires consciousness [Scruton]
2412 The physical can totally explain behaviour [Chalmers]
4941 Computers can't create axioms, minds can [Edelman/Tononi]
9780 Consciousness is a malfunction of evolution [Zizek]
4741 Consciousness might restrict mental operation [Clark,T]

e. Cause of consciousness

20118 Only our conscious thought is verbal [Nietzsche]
9286 Relations of experiences make consciousness [James]
7394 Only the unconscious can explain consciousness [Dennett]
7890 Maybe representation produces consciousness [Papineau]
4921 Consciousness could be quantum binding [Penrose]
3141 Vision correlates with a 40Hz oscillation [Rey]
4092 Explain Mary, zombies, and the Hard Question [Crane]

2386 Why do brains have inner experience? [Chalmers]
2416 Awareness-plus-something is consciousness [Chalmers]
2423 Why should simple systems lack consciousness? [Chalmers]
4916 Consciousness is in our frontal lobes [Carter,R]
4930 Consciousness is interacting neuron groups [Edelman/Tononi]
9312 Consciousness: representing, or represented? [Kriegel/Williford]
9315 Experience is conscious if self-representing [Kriegel/Williford]
9313 Representation can't explain consciousness [Kriegel/Williford]
9316 Self-representation views have three problems [Kriegel/Williford]

f. Higher-order thought

5002 Consciousness is self-awareness [Locke]
4086 Does consciousness need self-consciousness? [Kant]
7111 Consciousness is conscious of itself [Sartre]
4888 Animals may experience without knowing [Perry]
8895 If there is consciousness, which level is it? [Bonjour]
2453 Only humans can contemplate their thoughts [Fodor]
7885 Actual higher thought makes consciousness [Papineau]
7886 Can a thought become conscious if remembered? [Papineau]
7887 Possible higher judgements are the key [Papineau]
7888 Evidence goes against the disposition view [Papineau]
12586 Consciousness of a belief isn't a belief [Peacocke]
9320 Higher-order thought, or perception? [Gulick]
9321 High-order reduces all mind to intentionality [Gulick]
9322 High-level reveals our low-level qualia [Gulick]
9314 Higher-order representation involves error [Kriegel/Williford]

2. Unconscious Mind

workings of mind hidden from consciousness

21827 Mind is continuous, awareness of it is not [Plotinus]
16634 I know everything that is in me [Descartes]
7118 Disguised self-love implies an unconscious [Rochefoucauld]
2603 There is no adequate sign of innate ideas [Locke]
12944 We are unaware of many perceptions [Leibniz]
19355 Minds aren't full self-aware [Leibniz]
21369 We have unadmitted desires and fears [Schopenhauer]
21478 Half our thinking is unconscious [Schopenhauer]
20116 Most of our life is non-conscious [Nietzsche]
20120 Only simplistic thought becomes conscious [Nietzsche]
3488 Are unconscious states mental or not? [Freud]
22226 Sartre rejected the unconscious mind [Sartre]
3486 The unconscious is potential consciousness [Searle]
3503 Mind is either conscious or physical process [Searle]
2964 Most subconscious states also have qualia? [Lockwood]
2951 Beliefs and desires without consciousness? [Lockwood]
4691 Consciousness can't see or speak [McGinn]
21833 We overrate conscious experience [Flanagan]

3. Privacy

exceptionally private nature of thought

2109 You can't see thought in a conscious machine [Leibniz]
4161 If lions talked we wouldn't understand them [Wittgenstein]
7392 A lion that talked would be unlike other lions [Dennett]
7391 Bat minds aren't that private or mysterious [Dennett]
7522 Neuroscience offers extra knowledge of qualia [Churchlands]
5341 Subjective experience needs links to nerves [Flanagan]
3148 Is there privacy beyond even telepathy? [Rey]
2403 Complete physics doesn't predict consciousness [Chalmers]
5210 Penetrate privacy by scan and experience [Douglas,A]

4. Intentionality

mental events being 'about' reality

a. Nature of intentionality

3364 Every mental event has an object [Brentano]
7107 Intentionality defines and unites mind [Sartre]
3465 Surely everything doesn't have intentionality? [Searle]
3484 We could describe any process intentionally [Searle]
3489 Intentional phenomena need a background [Searle]
3367 Language is intentional as well as minds [Kim]
15473 How does anything get outside itself? [Fodor]
2485 Holism tends to deny intentionality [Fodor]
4993 Bird behaviour is 'about' worms [Kirk,R]
11935 Physical powers are also directed [Molnar]
6543 Intentionality comes in degrees [Lycan]
6481 Have intentional states intrinsic properties? [Robinson,H]
4087 Intentionalism need not be propositional [Crane]
4095 Attitudes can aim at objects and propositions [Crane]
4623 Propositions & images are intentional [Heil]
4929 Dreams generate meaning without input [Edelman/Tononi]

15018 Intentionality is too superficial for physics [Sider]

b. Intentionality theories

6491 Berkeley denies intentionality [Berkeley]
18088 Intentionality is the mark of dispositions [Place]
2554 Intentionality is an aspect of function [Rorty]
3481 Intentionality requires consciousness [Searle]
3494 Intentionality is essentially representation [Searle]
3365 Referential and Content Intentionality [Kim]
2325 Intentionality isn't an optional extra [Kim]
3158 Intentional theories presuppose rationality [Dennett]
2527 Mind is built on unconscious intentionality [Dennett]
2981 Folk psychology reflects inner mentalese [Lyons]
7326 Intentionality isn't part of physics [Fodor]
15494 Circular to explain intentions as propositions [Fodor]
3976 Intentional science needs semantic causal laws [Fodor]
3980 Intentionality is symbols linked by causation [Fodor]
5000 Is intentionality external or internal? [Kirk,R]
3164 Intentionality always seems presupposed [Rey]
6537 The teleological view allows for false content [Lycan]
2978 Intentionality may not be conscious [Lyons]
2400 Intentionality is causal links, not a thing [Chalmers]
4626 Does intentional content need causal links? [Heil]
7010 Intentionality is grounded in dispositionality [Heil]
7054 Is intentionality internal or external? [Heil]
4940 Is information order, or symbolic exchange? [Edelman/Tononi]

5. Qualia

raw experiences, such as the redness of a red object

a. Nature of qualia

3151 Descartes was dualist on reason, not sensation [Rey]
5808 Qualia are represented properties [Dretske]
5788 Qualia are not separate from consciousness [Searle]
4894 Mary knows an old fact in a new way [Perry]
4895 Are qualia inexpressible knowledge? [Perry]
4886 Mary gets new knowledge when seeing red [Jackson]
3360 Are pains motivational as well as qualia? [Kim]
8209 Qualia enable recognition and comparison [Lewis]
2584 Lobotomy produces indifference to pain [Block]
6624 Dennett denies that qualia exist [Dennett]
4873 We don't experience discomfort in sleep [Dennett]
3138 Propositional attitudes usually lack qualia [Rey]
3142 Why one experience rather than another? [Rey]
4106 Blurred vision changes qualia, not content [Crane]
2389 Pain can go unnoticed [Chalmers]
2419 In neuron replacement qualia shouldn't fade [Chalmers]
4905 Normal babies have synaesthesia [Carter,R]

b. Qualia and intentionality

3225 Unity of mind links qualia to attitudes [Brentano]
7438 Mental qualities are entirely intentional [Anscombe]
7705 Intentionality is independent of qualia [Jacquette]
4088 Pain is not an intentional state [Searle]
8130 Qualia are just representations [Harman]
3366 Sensations seem to lack intentionality [Kim]
6172 Phenomenal properties are not representational [Block]
3224 Non-functional qualia would be accidental [Rey]
3227 Qualia are a type of propositional attitude [Rey]
4089 Pains have the body as intentional content [Crane]
2532 Consciousness makes intentionality unreducible [Sturgeon]
7272 Are qualia more basic than intentionality? [Gildersleve]

c. Explaining qualia

12601 Qualia are relational, not intrinsic [Harman]
2582 No mechanism explains qualia, let alone brains [Block]
7387 Qualia are complex brain dispositions [Dennett]
7658 You can't define qualia without their function [Dennett]
7521 We can't assume that qualia are totally simple [Churchlands]
7523 The Hard Problem is the co-ordination of mind [Churchlands]
3226 Qualia aren't needed to explain mind function [Rey]
6546 Pain is composite, at different brain levels [Lycan]
6547 Qualia are found at top or bottom levels [Lycan]
4090 Are qualia intentional, or a bonus property? [Crane]
7706 Intentionality more basic than qualia [Jacquette]
7011 Qualia are intrinsic, not extras [Heil]
4935 'Red' is a point in neural space [Edelman/Tononi]

6. Inverted Qualia

one stimulus causing opposite experiences

3522 Violet and marigold could be inverted [Locke]

2421 Inverted qualia seem to be possible [Locke]
3389 Qualia shifts undermine causal role [Kim]
3391 Crosswired qualia undermine functionalism [Kim]
7376 Change of qualia may change behaviour [Dennett]
3229 Weird colour experience is logically possible [Rey]
4107 Inverted qualia preserve beliefs [Crane]
2402 Inverting experience in a brain seems possible [Chalmers]

7. Blindsight

evidence of perception without consciousness

7372 Blindsight is a bit like our peripheral vision [Dennett]
7373 Blindsighters get very little information [Dennett]
2953 Maybe fish use blindsight to navigate [Lockwood]
2415 Blindsight isn't truly aware [Chalmers]
4918 In blindsight V1 is broken, but V5 works [Carter,R]
6646 Blindsight destroys one of two visual systems [Lowe]

C. Capacities of Minds

1. Faculties

theory that each distinct capacity has a specific source

20204 Minds have distinct capacities [Aristotle]
20785 Six modes of concept-formation [Stoic school]
21799 Talk of 'faculties' implies ignorance [Galen]
22107 Sensation is passed to 'phantasia' [Aquinas]
21800 Faculties reduce to will and intellect [Descartes]
21804 Faculties are either fictions, or universals [Spinoza]
2869 A 'faculty' can't explain synthetic a priori [Nietzsche]
9346 Pure universality shows an a priori faculty [Kant]
5572 Reason is logical and transcendental [Kant]
14868 Our primary faculty is perception of structure [Nietzsche]
2539 Consensus says the mind is modular [McGinn]
20657 There are 23 core brain functions [Watson]
22135 Simplified concepts don't falsify [Boulter]

2. Imagination

forming mental pictures, esp counterfactuals

9098 Mental activity joins senses and imagination [Aquinas]
1399 Imagination is not essential to the self [Descartes]
17260 Imagination is just weakened sensation [Hobbes]
7721 Imagination is crucial to thinking [Locke]
21806 The foundation of thought is imagination [Hume]
7647 Imagination is the soul, playing all its roles [La Mettrie]
8094 Imagination discovers more than the eye does [Joubert]
14769 Only imagination links phenomena rationally [Peirce]
14628 Imagination is important, for necessity [Williamson]
6901 Understanding is needed for imagination [Betteridge]
11081 Imagination: abstract, spatial, independent [Hanna]

3. Abstraction by mind

singling out properties and parts of reality for special attention

9092 Abstracting A from B generates truth [Aquinas]
9101 We abstract universals from many singulars [William of Ockham]
9102 We might abstract 'animal' from one instance [William of Ockham]
10499 Abstraction is knowing by parts [Aronald,A/Nicole,P]
6711 Abstraction separates quality from object [Berkeley]
10581 No abstractions; just combined particulars [Berkeley]
9079 We focus on what is common to a whole class [Mill]
20363 We equalise leaves, to get 'leaf' [Nietzsche]
9575 Abstractionism establishes unity or difference [Husserl]
9032 We must recognise a property to abstract it [Price,HH]
9034 Abstract recognition might precede concepts [Price,HH]
9035 Judgement requires complete abstraction [Price,HH]
9037 Intelligent behaviour involves abstraction [Price,HH]
9036 Some abstraction is pre-verbal [Price,HH]
8775 Big fleas are small so we can't abstract 'big' [Geach]
8776 The converse is part of a relational concept [Geach]
15493 Memory needs abstracta, as reminders [Martin,CB]
15450 Is abstraction just mereological subtraction? [Lewis]
18525 Abstracted things aren't mind-dependent [Heil]
10203 We abstract simple structures from patterns [Shapiro]
8966 An act of abstraction identifies properties [Lowe]
16561 Abstraction is just ignoring the details [Machamer/Darden/Craver]
4460 Abstraction selects some features of a thing [Moreland]
10998 The mind abstracts real possibilities [Read]
8954 A pure circle can't identify an actual circle [Szabó]
19736 Neural networks can spot generic features [New Sci.]

4. Objectification

tendency to treat properties and concepts as objects

12476 We see unities everywhere [Locke]
12501 The mind can unify anything [Locke]
20338 We sometimes treat types as tokens [Wollheim]
12065 We unify soldiers as armies [Wiggins]
10004 We excel in reasoning about objects [Hofweber]
14930 Maybe human thinking requires objects [Ladyman/Ross]

5. Generalisation by mind

uniting similarities in reality into single propositions

18911 Higher terms are predicable of more things [Aristotle]
9068 Primitive principles are built by perception [Aristotle]
9069 Perceptions gradually build universals [Aristotle]
9088 Skill is generalising from similarities [Aristotle]
16153 Two sorts of generality - kinds and properties [Aristotle]
9093 Ignore peculiarities to understand definitions [Aquinas]
9095 We abstract the very general from substance [Aquinas]
9097 The mind abstracts from and uses images [Aquinas]
9099 Particular first, then abstracted generality [Aquinas]
10508 Species are found by ignoring individuality [Aquinas]
12126 People naturally love generality [Bacon]
10501 Partial ignoring gives generalisations [Arnauld,A/Nicole,P]
9083 Abstracta are generalised appearances [Locke]
7040 General words abstract from the circumstances [Locke]
12951 Abstraction concerns general universal truths [Leibniz]
19759 Only words can achieve generalisation [Rousseau]
19760 General ideas are purely intellectual [Rousseau]
19242 Generalization is the true aim of life [Peirce]
19255 Generalisation is the great law of mind [Peirce]
18310 The 'highest' concepts are the emptiest [Nietzsche]
21569 We should generalise as much as possible [Russell]
10732 Mere recognition won't generalise [Geach]
18375 General truths are a type of negative truth [Armstrong]
19169 Predicates introduce generality [Davidson]
15301 Particulars are intrinsically generalisable [Harré/Madden]
9330 Generalization precedes similarity-spotting [Lehrer]
18266 Mathematics generalises by using variables [Coffa]
9152 Only many instances show green as a type [Fine,K]
18504 Generality is a mode of presentation [Heil]
17696 Abstract nouns are not generic concrete nouns [Laycock]
17937 Generalise by extending, or by abstracting [Colyvan]

6. Idealisation

simplifying experiences to make them precise and clear

9791 Magnitude and movement impede accuracy [Aristotle]
10500 Attend to length and ignore width [Arnauld,A/Nicole,P]
19591 Hostility to the imperfect is an illness [Novalis]
13600 Models don't idealise, they essentialise [Ellis]
15868 Unlike idealisation, abstraction omits features [Harré]
18075 Idealisation trades accuracy for simplicity [Kitcher]
18206 Scientists idealise all the time [Maddy]

7. Seeing Resemblance

seeing recurrences of properties and structures

191 Everything resembles everything else a bit [Plato]
9067 Many memories can form a single experience [Aristotle]
17712 General ideas resemble some particular [Hume]
2210 Pictures conjure up absent friends [Hume]
8544 Hume needs degrees of resemblance [Shoemaker]
9081 Concepts result from comparisons [Mill]
5410 I can learn universal resemblance from colours [Russell]
16934 General terms depend on similarities [Quine]
16938 Are 'respects' needed to spot resemblances? [Quine]
8486 Spacings of colour qualities can be mapped [Quine]
16947 Similarity is just interchangeability [Quine]
15755 Hume needs degrees of resemblance [Shoemaker]
12661 Resemblances don't themselves resemble [Fodor]

8. Remembering Contiguity

linking memories by the same time or same place

4832 Experiences mentally connect objects [Spinoza]
12528 We connect pain with where it happened [Locke]
2211 Home becomes more vivid as we approach it [Hume]

9. Perceiving Causation

instant assumption of causal relations in perception

2212 Possessions best remind us of the dead [Hume]
2214 Reason is slow, late developing and unreliable [Hume]

14870 We use our experience to explain change [Nietzsche]
8329 Are causal relations observed, or theoretical? [Sosa/Tooley]
4769 Causation is presupposed in psychology [Psillos]
17527 Causation may be an innate concept [Bird]

10. Conatus/Striving

basic inbuilt drive for survival and self-benefit

19373 A 'conatus' is an initial motion [Hobbes]
20307 Everything tries to persevere [Spinoza]
21803 Mind/body conatus is the essence of man [Spinoza]
21869 External force far exceeds personal force [Spinoza]
13193 Active force must involve a real effort [Leibniz]
19364 Will is seeking good, and avoiding bad [Leibniz]
13183 Forces are internal lawlike strivings [Leibniz]
20131 Cultivate yourself, like a gardener [Nietzsche]
20355 A person's nature is ranking of their drives [Nietzsche]
21867 Conatus is survival brain circuits [Damasio]
21866 'Conatus' is endeavour for advantage [Lord]

16. Persons

A. Concept of a Person

1. Existence of Persons

whether persons really differ from human beings

1400 Some cause must unify stages of the mind [Descartes]
5512 'Self' at an instant, and 'person' over time [Locke]
1202 Persons are rational, conscious and self-aware [Locke]
4042 Intelligible metaphysics requires 'people' [Davidson]
3238 A person can die as well as a body [Williams,B]
3239 We fall in love with tokens, not person-types [Williams,B]
20618 Self: aware, self-aware, reason, motive, comms [Warren]
4669 Persons think, relate, feel and are self-aware [Glover]
6665 Persons are selves - self-aware subjects [Lowe]

2. Persons as Responsible

concept of a person is needed for responsibility

1381 The law agrees that madness changes identity [Locke]
1385 Persons are responsible, so can follow laws [Locke]
1359 Personal identity is the fixed basis of rights [Reid]
3823 Past responsibility needs personal identity [Searle]
4272 'Person' derives from Roman law [Scruton]

3. Persons as Reasoners

concept of a person is needed for reasoning

8143 Self uses intellect to control the body [Anon (Upan)]
21319 Rational thought requires one thinker [Reid]
3821 Reasons for action require a self [Searle]
3824 Selves can reason about actions [Searle]
3834 Rational agents must have selfhood [Searle]

4. Persons as Agents

concept of a person is needed for actions

7502 The self is what I can be master of [Stoic school]
21421 Man is pointless, but persons invaluable [Kant]
5647 Self presupposes desires and its objects [Hegel]
15579 My existence is defined by 'I can' [Heidegger]
3847 Man is the sum of his actions [Sartre]
4020 Modern self is reason, explore, commit [Taylor,C]
3825 Perception needs no self, but action does [Searle]
3797 I am the sum of my direct controls [Dennett]
9757 An agent necessarily has future self [Korsgaard]
9758 Agency is the key to personal identity [Korsgaard]

B. Nature of the Self

1. Self and Consciousness

possibility that only conscious beings could have a Self

1372 Personal identity may have several substances [Locke]
1378 The body is also part of personal identity [Locke]
5664 Consciousnesses are identified by bodies [Ayer]
3826 A self has to be conscious [Searle]
3829 Self is aware, reasonable, active, responsible [Searle]
6381 The mind and the self are one [Polger]

2. Ethical Self

Self as an inseparable part of moral life

20742 The real subject is ethical, not cognitive [Kierkegaard]
1457 Morality requires a belief in the self [Rashdall]
4002 There are links between self and goodness [Taylor,C]
4363 What counts as a good or bad 'person'? [Hursthouse]

3. Self as Non-physical

Self is a distinct substance

276 Personal identity is in the soul, not the body [Plato]
3609 Mind doesn't need a place or a material base [Descartes]
5627 A centre of gravity is not a substance [Kant]
16002 Self is pairs of opposing attributes [Kierkegaard]
15811 It is 'being me' that picks me out [Chisholm]

4. Presupposition of Self

Self can be inferred to exist, rather than experienced

21317 Mind fluctuates, but the person stays the same [Butler]
9751 We must view ourselves as noumena [Kant]
21450 Representation is impossible with a self [Kant]
22060 Self is the principles knowledge needs [Fichte]
22066 Novalis widened the concept of the Ego [Novalis]
22016 The self emerges from normativity [Fichte]
22073 The pre-experience Self is essentially free [Schelling]
21225 Psychological ego and pure ego [Husserl]
2940 Self is a limit of the world [Wittgenstein]
7109 If thought is internal, identity is external [Sartre]
3827 The self is not an experience, nor experienced [Searle]
3285 Ego may be unavoidable, despite the evidence [Nagel]
3293 Is a future self still MY self? [Nagel]
3244 Personal identity can't be known a priori [Nagel]
3245 'Whose experience?' is a good question [Nagel]
7385 Must the self be All or Nothing? [Dennett]
19650 The transcendental ego is a set of conditions [Meillassoux]

5. Self as Associations

Self is a unity formed by associating mental events

3819 One mind, ten thoughts; or ten minds? [Searle]
1317 A person is a bundle of fluctuating perception [Hume]
1388 Hume sketches a causal theory of identity [Perry]
1331 Perhaps personal identity is a causal network [Hume]
21297 People are bundles of fluctuating perceptions [Hume]
5323 Experiences are felt to be continuous [Ayer]
5172 The self must be made of sense-experiences [Ayer]
5325 Must experiences relate to a subject? [Ayer]
5326 Persons bring qualia under concepts [Ayer]
3820 The bundle needs agency and a self [Searle]
3539 The self is just causally linked mental states [Parfit]
1394 Thoughts in bundles are isolated [Carruthers]
1395 What makes a thought belong in a bundle? [Carruthers]

6. Self as Higher Awareness

Self as concerned with awareness of awareness

22019 Consciousness of objects needs a self [Fichte]
5381 We know our selves, but not as permanent [Russell]
7106 The Ego is in the world, not in consciousness [Sartre]
9264 Persons have second-order desires [Frankfurt]
9266 Persons have second-order volitions [Frankfurt]
4881 A person needs second-order thought [Dennett]
2506 A self is needed to co-ordinate mind modules [Fodor]
3223 Self-aware needs 'I' & nested intentionality [Rey]
20589 Second-order desires are the true self [Tuckness/Wolf]

7. Self and Body

extent to which the body is essential to a Self

a. Self needs body

4836 Mind knows itself through the body [Spinoza]
5583 Deduce a self rationally to avoid materialism [Kant]
20757 Your guiding self is your body [Nietzsche]
15583 Mortality is more certain than the Cogito [Heidegger]
5173 Experiences are united in a self by a body [Ayer]
5176 Personal identity is bodily identity [Ayer]
5668 We identify conscious states by bodies [Ayer]
5324 Body and memory are joint criteria [Ayer]
9263 'Person' refers to consciousness-plus-body [Strawson,P]
5673 We are aware of the bodily self in pains [Cassam]
16236 We persist as bodies, not as persons [Olson]
6669 'Animalism' says I am not a person [Olson]
4936 The self is based on our bodily awareness [Edelman/Tononi]
6144 A child can be held in your arms [Merricks]

b. Self as brain

6670 If my brain can survive, I am not my body [Lowe]
3540 We meet other people, not their brains [Maslin]

c. Self as brain controller

5952 I am not my soul, but its chief part [Plutarch]

7383 Self is an abstraction, not a brain part [Dennett]

C. Self-Awareness

1. Introspection

learning about our minds by looking inwards

5676 I know I am in pain means I am in pain [Wittgenstein]
5690 Self-intimation and infallibility are false [Armstrong]
5687 Is introspection awareness of awareness? [Shoemaker]
5688 Empirical foundationalism is introspective [Shoemaker]
5803 Introspection is displaced perception [Dretske]
5805 Introspection does not involve looking inward [Dretske]
5807 Introspection is like experience [Dretske]
3467 We can't introspect or have privileged access [Searle]
3483 We have no capacity for inward vision [Searle]
3422 Know the world to know yourself? [Kim]
9328 Attention reveals any conscious state [Lehrer]
8831 Introspection is (brief) retrospection [Goldman]
2967 Introspection might reveal facts about physics [Lockwood]
5692 Introspection involves no extra sense quality [Rosenthal]
5670 We know thoughts and their contents [Cassam]

2. Knowing the Self

directly acquiring knowledge of our Selves

8147 Seek to know you true inner Self [Anon (Upan)]
18463 Introspection can reveal our substrate [Porphyry]
21861 Self-knowledge needs knowledge of the body [Spinoza]
19362 Seeing necessities reveals the self [Leibniz]
5570 Self-knowledge can only be appearance [Kant]
7543 For self-knowledge, try to do your duty [Goethe]
4191 We know ourselves as a will [Schopenhauer]
21367 I know my body as representation and as will [Schopenhauer]
19249 Know yourself from outside, not inside [Peirce]
20378 Vanity hides the passions of the soul [Nietzsche]
20242 Self-awareness needs total knowledge [Nietzsche]
20249 We can never know our many drives [Nietzsche]
4551 Be conscious of yourself as mankind [Nietzsche]
22214 We never encounter our own Ego [Husserl]
22162 Everyday self, and authentic self [Heidegger]
7117 We can't have two communicating I's [Sartre]
7123 Self-knowledge uses a false exterior view [Sartre]
22225 Other egos are as certain to me as mine [Sartre]
5322 Experiences do not intrinsically have an owner [Ayer]
3073 We see our own selves as a map [Harman]
8129 Anti-individualism denies self-knowledge? [Burge]
5671 Self-knowledge is partly from outer senses [Cassam]
5672 Can self-awareness be non-perceptual? [Cassam]
5675 Self-consciousness and -reference are simple [Cassam]
20218 Its knowledge reveals the self [Zagzebski]
18421 Must proprioception represent you? [Cappelen/Dever]
18422 Proprioception concerns the body, not you [Cappelen/Dever]
18425 Mirrors a means to self-knowledge! [Cappelen/Dever]

3. Limits of Introspection

what may be unknowable by introspection

5886 Like eyes, souls see things but not themselves [Cicero]
1316 No self is observable apart from perceptions [Hume]
5551 I only know myself as an appearance [Kant]
12115 Introspection is pure illusion [Comte]
2932 To 'know thyself' is impossible for us [Nietzsche]
7157 Thoughts causing thoughts is an illusion [Nietzsche]
5689 We are unconscious of many of our attitudes [Freud]
20429 Our own motives are too close to grasp [Fry]
5380 I am aware of myself when I perceive [Russell]
7116 When unreflective we have no 'I' [Sartre]
7124 The Ego appears when it is not sought [Sartre]
1354 Introspection can't study strong feeling [Ryle]
1353 Introspection is unreliable [Ryle]
5661 Identify experiences by owners, not vice versa [Ayer]
15815 Is the ego 'opaque', or 'transparent'? [Chisholm]
3468 I cannot observe my own subjectivity [Searle]
3363 It is hard to identify our emotions [Kim]
3412 How do we know what emotion we feel? [Kim]
3102 Why don't we experience falling asleep? [Magee]
5674 Introspection is too certain to know the body [Cassam]
6671 How can self-observing give general concepts? [Lowe]
3518 I can't be sure I understand something [Maslin]

4. Errors in Introspection

misleading information that can come from introspection

2726 We may be ignorant of our own dispositions [Audi,R]
3162 Experiments show introspection unreliable [Rey]
3163 Blindsight shows introspection unreliable [Rey]
2414 One could judge experience wrongly [Chalmers]
4622 Introspection involves error; it's a judgement [Heil]

D. Continuity of the Self

1. Identity and the Self

deciding when two selves are actually identical

364 All souls are identical in type [Plato]
571 Are Socrates and Socrates seated the same? [Aristotle]
5514 Philosophy mainly concerns numerical identity [Parfit]
7714 Diachronic and synchronic views of identity [Lowe]

2. Mental Continuity

sustained consciousness supprting the Self

a. Memory is Self

17216 If you forget all, you aren't the same man [Spinoza]
5175 Personal identity is perceptions, not memory [Ayer]
1363 Locke depends on memory, not consciousness [Reid]
1368 Memories are not the 'same' as experiences [Reid]
1373 Same person means same past awareness [Locke]
1380 Don't blame people for forgotten actions [Locke]
5027 A person is made of memories [Leibniz]
12942 Identity is separate from what we learn [Leibniz]
21313 Did we not exist in events we have forgotten? [Butler]
1332 Causation extends the self beyond memory [Hume]
1333 Self is remembering causes among perceptions [Hume]
21305 Memory both reveals and creates identity [Hume]
21307 If you forget a thing, you aren't that person? [Hume]
21323 Know a thief by similarity, yourself by memory [Reid]
7120 Is the Ego entirely false memories? [Sartre]
5665 Bundles of experience are united by memory [Ayer]
5666 All experience being remembered is a regress [Ayer]
1389 Memory can't identify other persons [Shoemaker]
1390 Bodily identity is needed to confirm memories [Shoemaker]
19744 A person extends into their memory aids [Clark/Chalmers]

b. Self as mental continuity

1650 For Socrates the soul is the self [Vlastos]
21828 A person is the whole of their soul [Plotinus]
5511 Consciousness unites the self [Locke]
12509 Could soul make a hog a man? [Locke]
1376 Several substances could be one person [Locke]
12512 Think like someone else, you are them! [Locke]
12513 If a soul transfers body, person is soul [Locke]
12514 Can't remember doing it? Not guilty! [Locke]
1397 Is substance relevant to personal identity? [Locke]
12973 Continuity suffices, even with gaps [Leibniz]
21306 Causal interconnections unite our perceptions [Hume]
21311 Can self remain when substance changes? [Hume]
7546 A man is a succession, bound by causal laws [Russell]
7946 Branching is a problem for memory criteria [Williams,B]
1393 Earlier and later selves are not the same [Parfit]
5521 We don't need mental identity, only continuity [Parfit]
5522 We need psychological continuity, not identity [Parfit]
5351 The self seems continuous, not unchanging [Flanagan]
5503 For survival, is personal identity vital? [Martin/Barresi]
5504 Maybe persons are four dimensional [Martin/Barresi]
7947 Processes, not states, matter for continuity [Macdonald,C]

c. Inadequacy of mental continuity

6139 Locke implies thoughts have two thinkers [Merricks]
5513 Two consciousnesses could be the same [Kant]
1345 Self being consciousness leads to scepticism [Butler]
1197 No two thoughts can be identical [Locke]
1364 Locke confuses identity with evidence for it [Reid]
12511 Do interruptions destroy our identity? [Locke]
1361 Consciousness can split into many persons [Reid]
21326 Locke confuses identity with the test for it [Reid]
1387 Substance is essential for stable identity [Perry]
21314 Consciousness presupposes personal identity [Butler]
21312 We see no connection between perceptions [Hume]
21321 Others' testimony also shows my past identity [Reid]
21324 Can 20 persons be 1, or 1 be 20? [Reid]
21325 Identity of boy-youth-old man can break down [Reid]

21327 Similitude of a horse isn't its identity [Reid]
1366 Consciousness is too unstable for identity [Reid]
21452 My temporal existence needs externals [Kant]
5582 Consciousness could pass to a new substance [Kant]
5327 Memories can't bridge breaks in experience [Ayer]
1396 Conscious states get identity from persons [Carruthers]

3. Reference of 'I'

what the word 'I' is taken to refer to

2965 Kant's 'I' is formal, not substantial [Kant]
21368 The mystery is 'I' for knowing and willing [Schopenhauer]
18289 'I' is performed by your body [Nietzsche]
15813 'I' means your own individual essence [Chisholm]
6666 All languages can express 'I' [Lowe]
6140 Can 'I' only refer to persons? [Merricks]

4. Split Consciousness

problems with the possibility of dividing consciousness or brain

7110 A transcendental ego splits consciousness [Sartre]
3246 I can't imagine my brain being split [Nagel]
1392 Survival and personal identity are different [Parfit]
5519 Saving twins by merging them is fine [Parfit]
5520 Identity of merged persons is verbal [Parfit]

5. Concerns of the Self

problems of the persistence of Self over time

21318 A changing self lacks duties and interests [Butler]
1391 Worries about our future are misunderstandings [Parfit]
16218 Care about our future selves is puzzling [Hawley]

6. Body sustains Self

only body can sustain the self over time

22063 Being effective implies have a body [Fichte]
5669 A body is needed to identify experiences [Ayer]

7. Self and Thinking

role, and necessity, of a self for thinking

5266 The thinking part is the individual self [Aristotle]
1401 My essence consists entirely of thinking [Descartes]
2299 Understanding is me,senses & imagination extra [Descartes]
6907 Minds grasp objects, so they are the essence [Descartes]
5017 We experience our own separate substance [Descartes]
6721 Ideas are perceived by the mind, soul or self [Berkeley]
1352 Thoughts change, but self is permanent [Reid]
5549 Thought must belong to a self-consciousness [Kant]

E. Rejecting the Self

1. Self as Indeterminate

the self is in a continual state of change

180 Old people change attributes but not identity [Plato]
181 Old people change, but remain similar [Plato]
12809 Nothing about me is essential [Locke]
15803 Self isn't abstract, or a bundle or process [Chisholm]
21843 People consist of many undetermined lines [Deleuze]

2. Self as Social Construct

we see ourselves totally through social influences

5648 The self presupposes a society [Hegel]
20368 Individuals are the sums of preceding humanity [Nietzsche]
8044 The self is just a peg on which to hang roles [Goffman]
7422 Subjects' forms vary in different situations [Foucault]
7386 Selves are social, not soul-pearls [Dennett]
18658 The 'Kantian' self is socially detached [Kymlicka]
4939 Is a self developed internally or externally? [Edelman/Tononi]
10349 Being 'an individual' is social [Kusch]
20942 Nazis think race predetermines the self [Bowie]
5502 Modern views of personal identity are external [Martin/Barresi]

3. Narrative Self

Self mainly concerns our stories, history and plans

4006 I know myself through my personal history [Taylor,C]
21050 Decision must be made within a story [MacIntyre]
7381 We create protective fictions of ourselves [Dennett]
7382 People posit a source for stories [Dennett]
5353 The self is an abstraction of autobiography [Flanagan]
5354 The self is developed through living [Flanagan]

4. Denial of the Self

denial that there is any such thing as a 'Self'

5517 Individuals are convention, not reality [Buddha]
7277 The perfect man has no self [Chuang Tzu]
7286 The self is irrelevant to clear vision [Chuang Tzu]

7906 Supreme wisdom finds no self anywhere [Ashvaghosha]
 21294 No sustained impression justifies a self [Hume]
 21295 Introspection only reveals perceptions [Hume]
 21298 We invent self to fill gaps in perceptions [Hume]
 21304 The sustained identity of a mind is a fiction [Hume]
 21308 No impression of self, so no idea of it [Hume]
 21310 Does a one-perception oyster have a self? [Hume]
 4175 Let individuality go, like the body's cells [Schopenhauer]
 7148 The 'I' is just a conceptual synthesis [Nietzsche]
 7138 'I' is a fiction to simulate 'knowledge' [Nietzsche]
 4527 We are not single, but multiple 'cells' [Nietzsche]
 6475 The self is just a logical fiction [Russell]
 20114 Everyone is other, and no one is himself [Heidegger]
 7115 Is the 'me' created by reflection? [Sartre]
 7121 A reflective Ego is cut off from the world [Sartre]
 7370 The brain is controlled by shifting coalitions [Dennett]
 7655 Our 'homunculus' is non-conscious parts [Dennett]
 5518 My own identity through change is boring [Parfit]
 5349 The self is a dangerous illusion [Flanagan]

F. Free Will

1. Nature of Free Will

what exactly a free will is understood to be

5118 Mind is unaffected by what it changes [Anaxagoras]
 8007 Aristotle never discusses free will [Aristotle]
 12961 Free actions must be deliberate [Aristotle]
 4118 Humans produce actions as parents do kids [Aristotle]
 6018 Epicurus saw the free will problem first [Epicurus]
 5771 Present knowledge doesn't necessitate events [Boethius]
 22111 Freedom is for judgements, not for the will [Aquinas]
 2283 We feel no external force in exercising will [Descartes]
 5010 Free will is obvious and innately known [Descartes]
 4814 A free act is determined by the thing alone [Spinoza]
 3792 We can decline to follow a desire [Locke]
 5023 The future is certain, but not necessary [Leibniz]
 3447 Experience supports free will, but not theory [Johnson,S]
 5596 Free will is absolute causal spontaneity [Kant]
 3739 Free will is a unique type of causality [Kant]
 21780 A free will will its own freedom [Hegel]
 3846 Man IS freedom [Sartre]
 9249 We don't know freedom, we experience it [Camus]
 9267 Free will is ability to choose your will [Frankfurt]
 3292 Fixing the free will problem is the hard bit [Nagel]
 3800 You can freely choose the only alternative [Dennett]
 3803 Could a will be freer than ours? [Dennett]
 2545 Free will is mental causation in action [McGinn]
 5338 Control of acts, or also thought and feeling? [Flanagan]
 5344 Free will is held to give numerous benefits [Flanagan]

2. Sources of Free Will

what makes free will in humans possible

20922 The swerve gives freedom to atoms [Epicurus]
 21671 Intrinsic powers cause voluntary motion [Carneades]
 5709 The swerve of atoms creates free will [Lucretius]
 5767 Reason needs free will in order to judge [Boethius]
 22131 We can change decisions in mid-act [Duns Scotus]
 19922 Only subservience to reason is freedom [Spinoza]
 21053 Experienced will obeys natural laws [Kant]
 3741 Free will cannot be understood [Kant]
 22040 Mental activity produces freedom [Hegel]
 22075 Only idealism reveals true freedom [Schelling]
 20323 Freedom is knowledge, arbitrariness and law [Jaspers]
 3791 Awareness of awareness is powerful [Dennett]
 3794 Foreknowledge permits control [Dennett]

3. Constraints on the will

even if the will is free, it is compelled in some ways

1855 We are compelled to will any absolute good [Aquinas]
 3789 Freedom is compulsion by reason [Descartes]
 8353 Freedom involves acting according to an idea [Anscombe]

4. For Free Will

defences of the existence of wills which are free

14516 There is no necessity to live with necessity [Epicurus]
 20834 Stoics give a good excuse for vice [Plutarch]
 1856 We will good, but choose between goods [Aquinas]
 1861 Will doesn't have to want pleasant things [Aquinas]
 1862 Thought can break the strongest habits [Aquinas]

1853 Will freely and rationally notes alternatives [Aquinas]
 1849 Will is rational, and can entertain opposites [Aquinas]
 2282 We experience no limits to the will [Descartes]
 4310 We have inner awareness of freedom [Descartes]
 9756 We act against our strongest desires [Kant]
 5597 A first beginning makes others possible [Kant]
 3740 Self-control is inherent in reason [Kant]
 21965 Daily life contradicts determinism [Fichte]
 20322 Freedom is not theoretical, but a quest [Jaspers]
 3444 Responsible events must be caused by people [Chisholm]
 3808 Rational decisions assume free will [Searle]
 3817 Choice between reasons shows free will [Searle]
 3818 We freely make reasons effective for action [Searle]

5. Against Free Will

reasons for doubting that free will is possible

20192 Start with responsibility, not voluntariness [Aristotle]
 20833 A swerve in the atoms would be unnatural [Chrysippus]
 7672 Stoics invented the free-will problem [Stoic school]
 1854 The will can't initiate the process of willing [Aquinas]
 6213 I cannot will to will, or will to will to will [Hobbes]
 2358 'Free' means 'unhindered', or it is meaningless [Hobbes]
 2384 Free acts follow appetite directly [Hobbes]
 2385 Each act of will has a prior unwilled cause [Hobbes]
 4871 Freedom is following our own nature [Spinoza]
 21802 Acts of will have a regress of causes [Spinoza]
 4837 Free will is just ignorance of causes [Spinoza]
 4843 Nothing could save Buridan's ass [Spinoza]
 4844 We cannot freely forget or remember [Spinoza]
 12494 We can't help willing things [Locke]
 19413 Knowledge restricts freedom of choice [Leibniz]
 19367 Willing to will gives an infinite regress [Leibniz]
 2222 Free will is a delusion of the mind [Hume]
 5296 Kant made political will into "free" will [Kant]
 4176 A priori we're free; experience shows necessity [Schopenhauer]
 2291 A thought comes when it wants not when I want [Nietzsche]
 2871 Free will is an absurd dream [Nietzsche]
 7135 Free will is a feeling of domination [Nietzsche]
 4414 'Free will' makes humans more interesting [Nietzsche]
 2624 We can't anticipate our own thoughts [Ryle]
 9268 If causation is avoidable, animals might do it [Frankfurt]
 3446 Hobbes says willing is predictable, Kant not [Chisholm]
 15821 Every event has a sufficient causal condition [Chisholm]
 2176 Free will problems misunderstand 'voluntary' [Williams,B]
 2181 Perfect rationality is NOT perfect freedom [Williams,B]
 7978 Making life-choices doesn't need free will [Baudrillard]
 5332 Only incorporeal minds can circumvent nature [Flanagan]
 5345 The idea of God taught us free will [Flanagan]
 3196 Show good evidence that free will exists [Rey]
 3195 If reason is computation, skip free will [Rey]
 7509 300 neurons are enough for basic behaviour [Pinker]
 4925 Brains initiate free acts unconsciously [Edelman/Tononi]
 9276 Most of our life just happens to us [Gray]

6. Determinism

everything is determined, so there is no free will

a. Determinism

6033 Everything happens by necessity of atoms [Democritus]
 5088 Is every event determined? [Democritus]
 21670 The motions of atoms is by necessity [Democritus]
 330 Evil men are caused by the body or education [Plato]
 14521 Are even denials of necessity by necessity? [Epicurus]
 1770 If crime is predestined, so is punishment [Zeno of Citium]
 3799 Dogs follow carts with or without choice [Zeno of Citium]
 20808 All is fated, by causes or principles [Chrysippus]
 20835 For fatalists all possibilities must occur [Plutarch]
 21391 We control actions, so determinism is false [Carneades]
 6029 Knowing all causes is knowing the future [Cicero]
 20875 Should we help disease and death? [Epictetus]
 5982 How can prophets see a non-existent future? [Augustine]
 5768 God's foreknowledge conflicts with free will [Boethius]
 5769 Which first, foreknowledge or necessity? [Boethius]
 4311 We don't know what makes us choose [Spinoza]
 7828 Only the actual is possible for God [Spinoza]
 2119 Perfect action according to reason is freedom [Leibniz]
 7841 Only ignorance creates belief in free will [Leibniz]
 3441 Perfect physics could predict the whole future [Laplace]

4170 Motive compels character to act [Schopenhauer]
 21477 We don't control our own thinking [Schopenhauer]
 20231 People formerly took outcomes as divine [Nietzsche]
 8352 Determinism needs an underlying system [Anscombe]
 8424 Determinism says identical world stay that way [Lewis]
 3892 Having a cause isn't determinism [Scruton]
 14939 Quantum theory might be deterministic [Ladyman/Ross]
 12410 There once was a man who said 'Damn!...' [Sommers,W]

b. Fate

14062 Myths are better than scientific 'fate' [Epicurus]
 20836 Fatalism does not entail laziness [Chrysippus]
 20837 Fate is a fixed causal chain of events [Chrysippus]
 21679 What type of cause produces fate? [Chrysippus]
 21674 Only natural necessities can be foretold [Carneades]
 13162 Sloths say impossible, or happen anyway [Leibniz]
 9253 We label as 'fate' what crushes us [Camus]

7. Compatibilism

free will is possible in a deterministic world

1837 There is some necessity, but we are also free [Epicurus]
 5971 Cause is not sufficient, but only predisposing [Chrysippus]
 6214 Water flows with freedom and necessity [Hobbes]
 12492 Agents, not wills, have liberty [Locke]
 12493 Freedom is following our preferences [Locke]
 5031 Reality is certain, but not necessary [Leibniz]
 19368 The will determines, but doesn't necessitate [Leibniz]
 2223 Liberty is being able to enact your will [Hume]
 3655 If causation isn't necessary determinism eases [Trusted]
 15617 Freedom and necessity are bound together [Hegel]
 6981 Past determiners of action are beyond control [Inwagen]
 6149 Determinism makes choosing impossible [Merricks]

17. Mind and Body

A. Mind-Body Dualism

1. Dualism

mind and matter are two quite different substances

3519 Man uses his body, so must be separate from it [Anon (Plat)]
 1710 Only pure thought will prove mind is separate [Aristotle]
 13307 Can you measure the size of the soul? [Seneca]
 21809 The soul is ideal, unlike body [Plotinus]
 21825 The soul is immaterial and spaceless [Plotinus]
 18458 Soul's disposition binds it to matter [Porphyry]
 22105 The intellectual soul is incorporeal [Aquinas]
 3608 I can deny body and world, but not my self [Descartes]
 3613 Reason is universal, unlike physical machines [Descartes]
 2276 Mind is separate from body and lacks extension [Descartes]
 2298 Body is extended and unthinking, mind opposite [Descartes]
 3423 Descartes has dual substances AND properties [Descartes]
 2303 Body is divisible, but mind is indivisible [Descartes]
 5011 Just thinking and extended substance [Descartes]
 19409 Bodies change, but souls do not [Leibniz]
 5585 Soul/body link physical, harmony or assistance [Kant]
 22039 Normativity puts Geist outside nature [Hegel]
 14802 Three relations of mind and physical laws? [Peirce]
 2620 The Ghost in the Machine is a category mistake [Ryle]
 4069 Descartes' 'mind' is not a substance [Crane]
 8289 Cartesian souls are not immaterial stuff [Lowe]

2. Interactionism

mind and matter mutually affect one another

5695 Only bodies touch bodies [Lucretius]
 6683 Spirit-body contact is quite incomprehensible [Augustine]
 3400 Intermingling needs something in common [Gassendi]
 3616 Soul unites with body for sense and appetite [Descartes]
 6153 Interaction breaches conservation of energy [Rowlands]
 6553 Descartes saw the interaction problem [Descartes]
 3654 Soul meets body in the pineal gland [Descartes]
 3469 There is no 'link' between mind and brain [Searle]
 3409 Mental causation makes total science hopeless [Kim]
 2446 For Cartesians interaction is just a miracle [Fodor]
 2445 How can thoughts be semantic and causal? [Fodor]
 9293 Interactions should show as energy [Teichmann]
 3911 Substances by definition don't interact [Scruton]
 2409 Quantum mechanics might allow dualism [Chalmers]
 2411 Interaction is set by psychophysical laws [Chalmers]
 4590 All causes are odd, not just mental ones [Heil]

3. Panpsychism

all matter has a mental aspect to it

5711 The earth has always been insentient [Lucretius]
5712 Particles seem not to have sensation [Lucretius]
12698 Bodies contain sense and appetite [Leibniz]
5510 Physical points are actually spiritual [Leibniz]
12760 Maybe minimal souls are everywhere [Leibniz]
19257 Whatever is First must be sentient [Peirce]
2966 Unsensed qualia make panpsychism implausible [Lockwood]
2543 Ordinary matter is potentially conscious [McGinn]
2424 Something as basic as mind can't be quite new [Chalmers]

4. Occasionalism

a third force (God) co-ordinates mind and matter

20700 Without God all operations would stop [Aquinas]
5025 No mind-body interaction or intervention [Leibniz]
7564 Occasionalism leads to false doctrines [Leibniz]
11944 God's laws, not God's miracles [Molnar]
19380 Occasionalism didn't support the Eucharist [Arthur,R]

5. Parallelism

mind and matter don't touch, but run in parallel

21860 Ideas and things run in parallel [Spinoza]
5038 God harmonises body and soul [Leibniz]
2596 Perfect construction makes universal harmony [Leibniz]
5046 Mind/body knowledge, but no influence [Leibniz]
19350 Body is mechanism, soul is immaterial [Leibniz]
19421 Soul and body are entirely independent [Leibniz]
19351 Soul both rules and submits to body [Leibniz]
3449 How does the mind know about the body? [Crease]

6. Epiphenomenalism

mind as by-product of matter, having no effect

3157 T.H.Huxley first proposed epiphenomenalism [Huxley]
3154 There is no evidence that mind moves brain [Huxley]
20374 Consciousness is an end, and causes nothing [Nietzsche]
3398 Epiphenomenalism makes mind pointless [Alexander,S]
14494 Epiphenomenalism is a pointless idea [Alexander,S]
3399 How could we know a mental epiphenomenon? [Kim]
4891 Epiphenomenalism's consistent with physicalism [Perry]
7379 A total epiphenomenon is undetectable [Dennett]
2599 How can intentional properties be causal? [Fodor]
7860 Epiphenomenalism is a weird causal dangler [Papineau]
7862 Minds cause our reports, not our actions [Papineau]
4074 If mind is function, it can't be epiphenomenal [Crane]
6625 How can we know causally inert qualia? [Lowe]

7. Zombies

possible complete human, but lacking awareness

12727 Zombies are imaginable but impossible [Leibniz]
4967 Brain state without the pain seems possible [Kripke]
9177 Imagine pains without brain states? [Kripke]
3487 Zombie behaviour needs internal content [Searle]
3390 Are inverted or absent qualia possible? [Kim]
3414 How could we prove zombies impossible? [Kim]
3288 Explain experience to the non-conscious [Nagel]
2413 If zombies don't need consciousness, nor do I [Chalmers]
7061 Zombies are to show consciousness is extra [Heil]
7063 Are mind and body contingently related? [Heil]
7064 Functional state entails mental state [Heil]

8. Dualism of Mind Critique

view that dualism is impossible or incorrect

2170 Homer doesn't distinguish mind from body [Homer]
1514 Accounts of the soul must refer to the body [Aristotle]
21402 Acting and acted upon need corporeality [Zeno of Citium]
6028 Pain and blushing show the soul is a body [Cleanthes]
2628 Why mix mind with matter unnecessarily? [Cicero]
3625 A thinking thing could be physical [Hobbes]
2552 Epistemology doesn't reveal ontology [Rorty]
4305 Descartes can't individuate minds [Cottingham]
4861 How do mind and body unite? [Spinoza]
6540 Even Descartes says mind/brain is united [Lycan]
7733 A is doubtful, B not, so they're different? [Maslin]
4308 Mind and body are one - thought and extension [Spinoza]
4846 Bodiless ideas are unthinkable [Spinoza]
7840 Maybe God lets matter think [Locke]
7645 Souls get weak when tired, like bodies [La Mettrie]
5589 We can't know the soul, whatever it is [Kant]

5630 Our idea of the incorporeal is all negative [Kant]
19596 Thoughts involve the whole body [Novalis]
14867 It is mad to think mind supernatural [Nietzsche]
5171 Mind/body problems are errors about substance [Ayer]
3359 Problem of mental causation doomed dualism [Kim]
7365 Accepting dualism is just giving up [Dennett]
3513 A dualist mind needs several 'special' powers [Papineau]
4982 Brain events with no cause or effect? [Kirk,R]
2955 In mental events are in time they are in space [Lockwood]
5343 People wanting free will like dualism [Flanagan]
6527 Dualism breaches conservation laws [Lycan]
6528 Psychology rests on chemistry in animals & us [Lycan]
4912 Loss of proprioception feels 'out-of-body' [Carter,R]

B. Behaviourism

1. Behaviourism

mind is no more than the sum of behaviour

7434 Define a mind as the cause of behaviour [Armstrong]
3369 The mental translates into the physical [Kim]
3428 Behaviourism is reduction via definitions [Kim]
4991 Behaviourism explains some things well [Kirk,R]
4994 Behaviourism avoids oversimplification of mind [Kirk,R]
3165 There are three types of behaviourism [Rey]
3180 Behaviourist must define mind states together [Rey]

2. Potential Behaviour

mind as a collection of dispositions to behave

2388 Behaviour isn't fixed by one mental state [Chalmers]
3354 Ryle relies on dispositions but denies them [Benardete,JA]
2567 Different mental states are just dispositions [Geach]
7436 Manifestations of dispositions needn't exist [Armstrong]
2590 Defining dispositions must mention qualia [Putnam]
4561 Sentences can cause irrelevant dispositions [Cooper,DE]
3076 Belief and desire help define dispositions [Harman]
3380 Dispositions are real things, not just words [Kim]
2574 Desires aren't directly linked to actions [Block]
7435 Dispositions are second-order properties [Jackson/Pargetter/Prio]
4992 Holistic behaviourism groups dispositions [Kirk,R]
4614 Dispositions are basic to physics [Heil]
7325 Dispositions can't explain normativity [Miller,A]

3. Intentional Stance

mind as a fiction created to deal with behaviour

3159 Intentionality just predicts others' behaviour [Dennett]
3796 Self is a fiction to explain motivation [Dennett]
3161 The intentional strategy need believers [Rey]
3986 The 'intentional stance' is for interpretation [Dennett]

4. Behaviourism Critique

reasons why behaviourism is false

5778 Toothache is only known introspectively [Russell]
6433 Explaining imagination needs images [Russell]
2387 If mind is behaviour, it can't cause behaviour [Chalmers]
2568 Beliefs lack matching behaviour [Geach]
3460 We can tightly control our behaviour [Putnam]
2591 Pain is independent of ability to move [Putnam]
4983 Complex thought can imply a behaviour [Davidson]
3458 Mind only relates to behaviour contingently [Searle]
3485 Want-water and want-H2O differ mentally [Searle]
3370 Abstract beliefs don't lead to behaviour [Kim]
3371 Mind-behaviour links are always defeasible [Kim]
3372 Behaviour is partly defined socially [Kim]
3373 Snake and human pain behaviour differ [Kim]
3001 Behaviourism can't explain mental causation [Fodor]
4990 An inverted spectrum contradicts behaviourism [Kirk,R]
2950 Only logical positivists believe behaviourism [Lockwood]
5347 Behaviourism says nothing of mental causation [Flanagan]
3167 Animals use minds, not just responses [Rey]
3173 How do animals see similarity in stimuli? [Rey]
3179 Behaviour is contingent, and often unimportant [Rey]
6554 Behaviourist greeting: "You're fine; how am I?" [Lycan]
4267 Conditioning affects behaviour not mind [Scruton]
4595 Mental states don't entail necessary behaviour [Heil]
6621 Explaining belief by behaviour is circular [Lowe]
9392 How do behaviourists greet each other? [Sommers,W]

C. Functionalism

1. Functionalism

mind is a causal network of functions

2683 Aristotle's soul can't accommodate reason [Ackrill]
1718 Soul doesn't think - it lets the man think [Aristotle]
2588 Pain is an organism's functional state [Putnam]
2589 Functionalism is not incompatible with dualism [Putnam]
2592 Functional states explain pain behaviour [Putnam]
3461 Functionalists like causal theory of reference [Searle]
3379 Most neurons seem interchangeable [Kim]
3388 Machine or Causal-Theoretical Functionalism [Kim]
2324 Intentionality may be explicable functionally [Kim]
2576 Desires involve internal and external states [Block]
2575 Functionalism is behaviourism plus mind states [Block]
2583 Functional states and beliefs must equate [Block]
2530 Software could make a robot conscious [Dennett]
2467 Functionalism makes pain a relational property [Fodor]
8131 Blurred vision has no function at all [Burge]
3186 Behaviour not brains proves minds exist [Rey]
3127 Dualism and physicalism don't say much [Rey]
6541 Allow inverted spectrum, but avoid chauvinism [Lycan]
6545 Folk psychology ignores low-level functions [Lycan]
7027 One disposition can have many qualities [Heil]
4759 Mind is a second-order property [Engel]
18419 Get Folk Functionalism from folk psychology [Cappelen/Dever]

2. Machine Functionalism

mind is in principle a Turing machine

3192 First-order logic doesn't need semantics [Gödel]
5495 Pains are tokens, but pain is abstract [Putnam]
2331 Robots & people are the same for functionalism [Putnam]
5804 The representational theory is externalist [Dretske]
2993 Function can always be hard-wired [Fodor]
12632 Concepts play the key linking role [Fodor]
6539 The software/hardware distinction is unclear [Lycan]
5496 Mind has physical, functional & mental levels [Lycan]

3. Psycho-Functionalism

minds exist as the result of brain function

2417 Functional organisation causes consciousness [Chalmers]
4599 Being a heart is not a physical property [Heil]

4. Causal Functionalism

mental states are defined in entirely causal terms

5493 Pains are causal, and hence physical [Armstrong]
4600 Are function and realiser identical? [Armstrong]
7429 Mental states are what produce behaviour [Armstrong]
7441 Experiences are causal, and hence physical [Lewis]
7442 'Pain' contingently names a causal role [Lewis]
7444 Combine type-type identity and functionalism [Lewis]
3011 Functionalism's causal aspect is right [Fodor]

5. Teleological Functionalism

mind as a set of interlocking purposeful functions

7438 Causal mental theories need teleology [Armstrong]
6533 Mental types are abstract teleological types [Lycan]
6535 Teleology shades off into physics [Lycan]
5499 Functions must serve an organism's purpose [Lycan]
6378 Function is reason for existence or activity [Polger]
6379 Mummified hearts have teleological function [Polger]
6377 Not what it does but what it is supposed to do [Polger]

6. Homuncular Functionalism

mind as a team of small independent functional units

7371 All functionalism is 'homuncular' [Dennett]
4875 We are made of crude intentional systems [Dennett]
5498 Mind is hierarchical complex homunculi [Fodor]
3188 Parts of the soul might be build on machines [Rey]

7. Chinese Room

counterexample of non-conscious function

2427 Chinese Room attacks machine intentionality [Searle]
7389 A very simple program cannot understand [Dennett]
7390 Does ignorant brain parts imply stupid brain? [Dennett]
3496 We can translate Chinese without understanding [Searle]
5789 Syntax is in the eye of the beholder [Searle]
3384 Could anyone really run the Chinese Room? [Kim]
3216 Is the room's interior like a Chinaman? [Rey]
3220 Did Victoria have the properties of an empire? [Rey]

2428 The whole Chinese Room understands [Chalmers]
6654 A program is person-and-manual [Lowe]
7335 Can the Room ask itself questions? [Westaway]

8. Functionalism critique

criticisms of the functionalist theory of mind

2348 There can't be one functional state per belief [Putnam]
2332 Functionalism is unable to explain truth [Putnam]
2071 Environment is needed to define a belief [Putnam]
3499 Computation presupposes consciousness [Searle]
3501 If we are computers, who is the user? [Searle]
3393 How does a functional network cause things? [Kim]
2578 If pain is function, it could take many forms [Block]
2585 Could Bolivia's economy have mental states? [Block]
2586 How can inputs and outputs define mentality? [Block]
3514 Functionalism must explain how actions occur [Papineau]
7870 Role concepts are realisers or constituters [Papineau]
3206 Formal structures have varied interpretations [Rey]
2418 It is amazing that ANY system is conscious [Chalmers]
4624 Functionalists can't cope with qualia [Heil]
7062 Functions can't explain consciousness [Heil]
6623 Functionalist is silent on spectrum inversion [Lowe]
6628 Funationalism ignores intrinsic properties [Lowe]
6629 Functionalism implies zombies [Lowe]

D. Property Dualism

1. Reductionism critique

arguments against reducing mind to brain

3529 Mind is holistic, but brain isn't [Davidson]
3964 Mind as anomaly makes reduction impossible [Davidson]
5798 Reduction of consciousness omits something [Searle]
3427 Reductionist theories can't find bridge laws [Kim]
3439 Qualia are the big problem for reductionism [Kim]
2314 Is intentionality reducible, but not qualia? [Kim]
4091 Can reductionisms explain intentional error? [Crane]
4601 Boundaries of higher sciences are irreducible [Heil]
4602 High level properties disappear if reduced [Heil]
2533 Normativity blocks reduction of intentionality [Sturgeon]

2. Anomalous Monism

mind is a causal oddity in a physical world

2307 Anomalous monism is uninformative [Davidson]
5497 Mind is outside of science [Davidson]
4081 Mind & matter can be one event/two properties [Davidson]
2321 If mind is anomalous, reductionism is wrong [Davidson]
3404 Only physical events can cause physical events [Davidson]
3963 There are no psychophysical laws [Davidson]
3965 Mental events aren't extra physical events [Davidson]
3961 All mind links causally to matter [Davidson]
2597 Why can't there be intentional causal laws? [Fodor]
7858 Identity of properties, or just particulars? [Papineau]
6121 Industries depend on psychophysical laws [Mellor/Crane]
5339 We can accept causation without strict laws [Flanagan]
3530 Only mental causation denies epiphenomenalism [Maslin]

3. Property Dualism

mind is a non-reducible physical property

5779 Psychological and physical laws differ [Russell]
2587 Temperature IS mean molecular kinetic energy [Putnam]
3405 Mental causation needs physical properties [Davidson]
3966 One stuff, conceived two ways [Davidson]
3453 Property dualism is old-fashioned Cartesianism [Searle]
3455 Property dualism makes the problem baffling [Searle]
3456 Consciousness is like water's liquidity [Searle]
3475 Property dualism denies reductionism [Searle]
3376 To identify mind with the brain, it must exist [Kim]
3424 Physical ontology, but dualism of properties [Kim]
2985 Beliefs are high-level physical processes [Lyons]
2489 To understand flight, don't study feathers [Fodor]
4070 There may be two distinct types of properties [Crane]
2406 No one is dualist about 'liquidity' of water [Chalmers]
4593 There are two distinct families of properties [Heil]
6622 Non-reduction is token-token supervenience [Lowe]
3520 Should the physical explain the mental? [Maslin]

4. Emergentism

mind as a product of complex matter

5787 There is non-event causation of mind by brain [Searle]
2313 For emergentists supervenience is inexplicable [Kim]

2328 Emergentism may be right about qualia [Kim]
4084 Emergentism just accepts supervenience [Crane]
2405 Physics doesn't entail mind, but causes it [Chalmers]
6148 Humans exercise downward causation [Merriks]
14911 Science is opposed to downward causation [Ladyman/Ross]
14556 Strong emergence implies top-down causation [Mumford/Anjum]

5. Supervenience of mind

total mapping of thoughts onto brain events

5018 Mind and body are separate if unified [Descartes]
5924 Identical objects must have identical value [Ross]
16041 Mind supervenes on the physical [Davidson]
3476 Mind/brain are cause/effect supervenient [Searle]
3477 Non-causal supervenience is epiphenomenal [Searle]
3531 Supervenience doesn't prevent mental causation [Searle]
3478 Talk of upward causation, not supervenience [Searle]
3362 Are all souls identical to one another? [Kim]
3413 Zombies & inversion undermine supervenience [Kim]
2309 Supervenience is physicalism sans reductionism [Kim]
2311 Maybe supervenience can't avoid reductionism [Kim]
2995 Supervenience makes mental causation possible [Fodor]
3510 Epiphenomenalism is non-physical supervenience [Papineau]
3511 Supervenience means mind always affects brain [Papineau]
7865 Replace supervenience with higher properties [Papineau]
4080 Supervenience links levels of causation [Crane]
2395 Zombies imply natural supervenience of mind [Chalmers]
17277 Supervenience lets mind explain brain [Fine,K]
6158 Supervenience and token-identity often link [Rowlands]

6. Mysterianism

we are incapable of explaining the mind-body link

9114 The existence of separate mind is unprovable [William of Ockham]
12500 Thought is puzzling, however it is done [Locke]
15996 Why do we have those experiences? [Locke]
12552 Mind-body baffling, in both directions [Locke]
4154 Why do people ignore the mind-body problem? [Wittgenstein]
3466 'Consciousness' seems indefinable [Searle]
4883 Bat behaviour may not be "like" anything [Dennett]
3287 Objectivity about mind makes it more obscure [Nagel]
7388 Imagining conscious machines is impossible [Dennett]
2540 Can't think the neurons, can't see the thought [McGinn]
9318 Phenomenal consciousness is just fundamental [Chalmers]
2404 Mouse consciousness is quite undecidable [Chalmers]
7059 Consciousness is inexplicable at the moment [Heil]

E. Mind as Physical

1. Physical Mind

mind is entirely physical in composition

20913 Thinking is a mixture of the body [Democritus]
13275 Soul and body are one, like wax/imprint [Aristotle]
20831 Soul events have physical effects [Cleanthes]
5719 The mind touches the body to move it [Lucretius]
5724 Animal character arises from their bodies [Lucretius]
16618 Mind totally depends on prime matter [Blasius]
6208 Thought is just motion in the head [Hobbes]
2948 Sensation is movement of parts [Hobbes]
4834 Mind and body are the same thing [Spinoza]
7652 There is one substance and man is a machine [La Mettrie]
19573 Soul is whether inner meets outer [Novalis]
5329 Why not brain depending on mind? [Ayer]
7431 Laws and mind-brain identity are contingent [Armstrong]
7430 Mind-brain identities are not rigid [Armstrong]
5797 Molecule patterns in the sea are very complex [Searle]
6976 The psychological depends on the physical [Jackson]
3374 Token-physicalism is much weaker than type- [Kim]
7445 Pain/brain identity is non-rigid & contingent [Lewis]
8579 Identity permits idealism or panpsychism [Lewis]
3994 Martian pain might be a different feeling [Lewis]
4879 There is no anger in adrenaline [Dennett]
2464 Type physicalism is identity of natural kinds [Fodor]
2468 Type physicalism is stronger than token [Fodor]
3515 Physicalism allows that bodies have experience [Papineau]
7892 Identity theory needs completeness of physics [Papineau]
6544 Identity theory is low-level functionalism [Lycan]
6503 Intentionality can't be a physical property [Robinson,H]
4075 Is identity of events or of properties? [Crane]
4085 Physicalism is the problem, not the solution [Crane]

6634 Physicalists must believe in narrow content [Lowe]
6380 Mind is state, event, process or property [Polger]
20656 Mind-influencing drugs changed views [Watson]
11142 Body-type affects conceptual scheme [Margolis/Laurence]
17766 Physicalism correlates, causes and unifies [Bayne]

2. Reduction of Mind

all mental events can be explained physically

5713 Laughter isn't made of laughing particles [Lucretius]
7550 We could infer mind from brain, and vice versa [Russell]
9317 Reduce mind to biology, but no further [Searle]
3474 Brain causes mind, but they may differ [Searle]
3500 Will mind break down into the non-mind? [Searle]
6986 Is physics supporting psychology a priori? [Jackson]
3433 WHY does mind reduce to the physical? [Kim]
4900 Kripke says mind-brain identity not contingent [Perry]
3989 A priori reductionism seems right [Lewis]
7657 Minds descend through homunculi to machines [Dennett]
7879 Mind-brain reduction doesn't explain much [Papineau]
20971 Weak reduction to causes, strong to laws [Papineau]
10826 Only reduction demonstrates physicalism [Field,H]
21834 Complex thought can't be just physical [Flanagan]
6530 The mind is homunculi, described by purposes [Lycan]
6536 Teleology explains psycho-physical laws [Lycan]
7704 Nonexistents cannot be reduced to the actual [Jacquette]
4597 Formerly identical 'processes', now properties [Heil]
4903 Similar ideas produce similar brain patterns [Carter,R]
4920 Thinking occurs in the upper prefrontal cortex [Carter,R]
4688 Imagination has a fixed capacity for images [Lavers]
8685 Biology presumes uncontradictable chemistry [Friend]

3. Eliminativism

there is no such thing as mind, only the brain

5997 Soul is just a configuration of the body [Dicaearchus]
9285 'Consciousness' is a nonentity [James]
3131 Quine is an instrumental eliminativist [Quine]
2344 Can eliminativism account for logic? [Putnam]
5800 Mind is representation, which is information [Dretske]
3377 Mind is just causes, or it is translatable [Kim]
4988 Folk psychology may be irreducible but true [Kirk,R]
4987 We can eliminate folk psychology [Churchland,PM]
7366 It is arbitrary which moment is conscious [Dennett]
7380 Vision is composed of neural activity [Dennett]
4876 Is there a minimum speed for a mind? [Dennett]
7656 Consciousness exists, but is misunderstood [Dennett]
4984 Psychology reduces to physics [Kirk,R]
2954 Lightning is merely electrical discharges [Lockwood]
5342 Physicalism doesn't deny experience [Flanagan]
3140 Reduction is not the same as elimination [Rey]
3134 Physicalism can't explain rational behaviour [Rey]
4609 How do we believe beliefs can be eliminated? [Heil]
6630 You can't eliminate reason and truth [Lowe]

4. Connectionism

mind is the sum of many associations/connections

3075 Could a cloud have a headache? [Harman]
2991 How can associationism generate rationality? [Fodor]
2447 How do representation & mental causation mix? [Fodor]
2490 Connectionism is just modern associationism [Fodor]
12624 Only mode labels mean in connectionism [Fodor]
4998 Representation by connection strengths [Kirk,R]
3199 Connectionism has node and branch levels [Rey]
3200 Connectionism explains pattern recognition [Rey]
3201 Connections are swift and degrade gracefully [Rey]
3202 Connectionism is good on irrationality [Rey]
2984 Content is information, not representation [Lyons]
7511 Neural networks can generalise their training [Pinker]
7512 Some thinking is beyond connectionism [Pinker]
18562 Connectionists miss the structure of thought [Machery]

5. Causal Argument

claim that mental causation requires physicalism

14042 An incorporeal soul could not interact [Epicurus]
20816 Causal relations require a body [Zeno of Citium]
3941 Unthinking substance can't cause thought [Berkeley]
22100 Two mental moments are never alike [Bergson]
6620 Identity is between causal events, not states [Davidson]
6383 Cause unites our picture of the universe [Davidson]
3438 Higher levels don't add causal powers [Kim]

3440 Only reduction explains mental causation [Kim]
 7856 Are physical effects caused twice over? [Papineau]
 4073 Overdetermination is two when one would do [Crane]
 4596 Identity theory simply solves mental causation [Heil]
 7012 How can higher level entities do anything? [Heil]
 2535 Double causation is the proof of physicalism [Sturgeon]

6. Conceptual Dualism

there is one substance, but our concepts are dualist

3643 Body and mind are exclusive concepts [Descartes]
 8462 Simply identify mental states with their host [Quine]
 7881 Dualism is conceptual, not ontological [Papineau]
 13396 Inclusionism: mental is part of physical [Jubien]

7. Anti-Physicalism

arguments against claims that the mind is physical

a. Physicalism critique

1909 How can physical brain judge or feel pleasure? [Sext. Empiricus]
 5885 Souls and elements have nothing in common [Cicero]
 5951 Atoms alone cannot produce a mind [Plutarch]
 6229 Material sense can't grasp universal abstracts [Cudworth]
 6382 Objects are granular, sensations are not [Sellars]
 5796 Information is not a causal fact of reality [Searle]
 2308 Putnam & Davidson demolished eliminativism [Kim]
 3002 Physicalism can't explain rationality [Fodor]
 6122 Psychology has ontological authority [Mellor/Crane]
 3150 Eight features of mind are hard to explain... [Rey]
 3129 Complexity is no sort of explanation [Rey]
 4072 Physicalism needs physics to be complete [Crane]
 4598 Physicalists deny reduction of mind [Heil]
 3448 Do new ideas make brains weigh more? [Dance]

b. Multiple realisability

7432 Physical variety, but a single role [Armstrong]
 6376 Science doesn't support multiple realisability [Polger]
 2330 Same mind states have diverse bases [Putnam]
 3429 Multiple realisation is the big anti-reduction [Davidson]
 3497 Multiple realisability is universal? [Searle]
 6992 One physical state can play many roles [Jackson]
 2322 Ideas may change their basis within a brain [Kim]
 4892 Martian pain won't be like ours [Perry]
 7443 Explain qualia-less behaviour and vice versa [Lewis]
 2579 Physicalism denies mind unfairly in places [Block]
 4878 Brains need speed, and transducers [Dennett]
 2598 Mountains and airfoils are multiply realizable [Fodor]
 3981 Properties of mind seem multiply realisable [Fodor]
 3512 Multiple realisation, but similar behaviour [Papineau]
 4985 Multiple realisability blocks physicalism [Kirk,R]
 3185 Multiple realisation denies essences [McGinn]
 6542 Martians: different sensations, human behaviour [Lycan]
 2429 Temperature is reducible & multiply realizable [Chalmers]
 4619 'Multiple realisability' needs separate levels [Heil]
 4620 Multiply realisable: predicates not properties [Heil]
 7043 One predicate can apply to many properties [Heil]
 4933 Mind is a process, unified during change [Edelman/Tononi]
 7734 Maybe mollusc brain events are humanoid [PG]
 7735 Functional but not phenomenal similarity? [PG]

c. Knowledge argument

7880 Is ontology changed by seeing what is known? [Papineau]
 7378 What would ALL physical information be like? [Dennett]
 7377 Colour adds to the physical information [Jackson]
 2327 Qualia inversion undermines functionalism [Kim]
 7866 Mary meets new concepts, not new properties [Papineau]
 4094 We can reason about raw experience [Crane]
 4594 Headaches and their physiology are different [Heil]

d. Explanatory gap

3375 If an image is orange, is its brain state? [Kim]
 4989 Physicalism needn't explain what it is like [Kirk,R]
 7876 Why do those neurons cause that feeling? [Levine]
 7877 Only phenomenal states have a gap [Levine]
 7878 Conceptual differences cause the gap [Papineau]

e. Modal argument

7867 What could be separate can't be identical [Kripke]
 3228 Pain must be pain; brain states needn't be [Kripke]
 5832 Pain is not necessarily a brain state [Kripke]
 4968 Are brain events and pain inseparable? [Kripke]
 9178 Pain is picked out by an essential property [Kripke]

18. Thought

A. Modes of Thought

1. Thought

intentional activity of the mind

1524 Thinking more or less IS sense perception [Empedocles]
 4405 Truth is the target of the intellect [Aristotle]
 5556 Pure understanding cannot be imagined [Kant]
 8103 A thought is as real as a cannon ball [Joubert]
 15608 Thinking is the production of universals [Hegel]
 8620 Laws of thought are the same everywhere [Frege]
 9581 Thoughts have a public component [Frege]
 8162 Thoughts exist in a realm called 'sense' [Frege]
 9818 Thoughts are what can be true or false [Frege]
 19469 There is thinking, judgement, and assertion [Frege]
 4419 Thinkers in words are just orators [Nietzsche]
 18717 We think by expressing thoughts [Wittgenstein]
 9033 The primary mental process is recognition [Price,HH]
 21880 All thought is controlled by tacit theory [Derrida]
 8174 Only meaning can explain thought [Dummett]
 8175 Thought theories must explain attitudes too [Dummett]
 6392 Thought depends on speech [Davidson]
 2992 How is rationality mechanically possible? [Fodor]
 2476 Thought is for understanding, not manipulation [Fodor]
 12640 Association loses sense, reference, truth [Fodor]
 12641 Composing concepts in connectionism? [Fodor]
 7850 Thinking about x needn't activate x [Papineau]
 7851 Thoughts cause movement, so they're physical [Papineau]
 4625 Is imagery pictorial or propositional? [Heil]
 18503 Thought of x needn't know what x is [Heil]
 6648 Is thought just suppressed speech? [Lowe]
 11082 Depictive or descriptive mental imagery? [Hanna]
 10663 Reference is the widest part of thought [Hossack]
 18561 Six higher cognitive capacities [Machery]

2. Propositional Attitudes

attitudes to propositions, such as belief, desire, hope, regret

5686 We will, fear, affirm or deny subjects [Descartes]
 3411 How do you know your attitude to propositions? [Kim]
 18416 Attitudes are self-ascribed properties [Lewis]
 2440 Propositional attitudes involve mentalese [Fodor]
 3139 Content is either neutral or motivating [Rey]
 2979 Surely intentionality requires representation? [Lyons]
 21631 Hope needs prior grasp of a thought [Williamson]
 18020 I relate to propositions, meanings, sentences? [Magidor]

3. Emotions

pure feeling, and its role in mind function

4014 Stoics judge passions by their morality [Stoic school]
 5963 Are reason and virtue to do with emotion? [Plutarch]
 4015 Passions keep mind and body together [Descartes]
 4313 Are there just a few primary passions? [Descartes]
 17261 The only emotions are desire and aversion [Hobbes]
 7832 Overcome emotions with higher emotions [Spinoza]
 17203 Weak ideas put passions in charge [Spinoza]
 4849 Pleasure, pain and desire are basic [Spinoza]
 4863 We control our emotions by knowing them [Spinoza]
 4864 Emotion is bad if it prevents thought [Spinoza]
 12935 Feelings are perceptions of truths [Leibniz]
 19415 Passions are in confused perceptions [Leibniz]
 15577 Moods also reveal things [Heidegger]
 22235 Feelings have a history [Foucault]
 2323 Emotion shows both qualia and intentionality [Kim]
 5335 Emotions are usually apt, not irrational [Finanigan]
 4269 Emotions are motives with feeling [Scruton]
 20205 Some feelings are neither pleasant nor painful [Zagzebski]
 4906 Babies are emotional, but unaware of emotions [Carter,R]
 4909 We manipulate the world to affect our emotions [Carter,R]
 9309 Emotions have objects and moods don't [Svendsen]

4. Folk Psychology

is the truth about minds found in normal speech?

2074 Functionalism wants scientific folk psychology [Putnam]
 3462 We don't postulate beliefs we experience them [Searle]
 6996 Folk psychology has input, internal, output [Jackson]
 3387 A culture without folk psychology is baffling [Kim]
 3386 Folk psychology is a stable theory [Kim]

3394 Folk psychology makes models of minds [Kim]
 3410 Freudianism is becoming folk psychology [Kim]
 3992 Folk psychology is good at predictions [Lewis]
 7518 Folk psychology as theory fits functionalism [Churchland,PM]
 7519 Folk psychology fails to explain many features [Churchland,PM]
 7520 Folk psychology is static and marginal [Churchland,PM]
 3177 Driving cars needs folk psychology [Dennett]
 3987 Desires and beliefs don't actually exist [Dennett]
 2988 Folk psychology is the only plausible theory [Fodor]
 3975 Folk psychology gives intentional explanations [Fodor]
 2987 Folk psychology won't work with strangers [Lyons]
 4607 Folk psychology & neuroscience don't conflict [Heil]
 3112 Folk psychology is good, but very dualist [Segal]
 15680 Folk essentialism has three sources [Gelman]

5. Rationality

mental capacity for reason and logic

4326 Emotions can be part of reason [Hursthouse]
 7650 Rationality is sensitivity to reasoning [La Mettrie]
 8687 'Intuition' links reasoning to experience [Kant]
 19451 Do I control my thinking, or does reason? [Feuerbach]
 19221 Self-overrated reason shows its superficiality [Peirce]
 19248 Reasoning: observe, experiment, habituate [Peirce]
 7171 We are stuck with our 'rationality' [Nietzsche]
 5369 Realism is rational but not demonstrable [Russell]
 9591 Human reason cannot be fully formalized [Nagel/Newman]
 7611 Rationality is part of human flourishing [Putnam]
 3967 Without rationality there is no thought [Davidson]
 6951 Rationality starts from current beliefs [Harman]
 2450 Mental causation is required for rationality [Fodor]
 12174 Only rational beings are disinterested [Scruton]
 4270 Is reason just what separates men and animals? [Scruton]
 4765 Stich an eliminativist about rationality [Stich]
 4914 Frogs starve to death surrounded by dead flies [Carter,R]
 6651 People are bad at estimating probabilities [Lowe]
 6652 People prefer evidence to its background [Lowe]
 4629 The essence of rationality is consistency [Baggini /Fosl]
 6555 Only humans believe in bizarre fictions [Fogelin]
 11046 Kantian rationality spots universal truths [Hanna]
 11048 Humean rationality seeks contingency [Hanna]
 11047 Hegelian rationality seeks coherence [Hanna]
 11067 Rationality grasps normative necessity [Hanna]
 11068 Logic or language the essence of reason? [Hanna]
 20990 Rationality conforms to scrutinised reasons [Sen]
 16419 We need a rationality test [New Sci.]

6. Judgement

a mind's evaluation of truth and falsehood

a. Nature of Judgement

6594 Knowledge needs an invincible criterion [Stoic school]
 1884 Logic is only possible if propositions coexist [Sext. Empiricus]
 22108 First what, then features, then assessment [Aquinas]
 22061 Judgement is spotting and relating concepts [Fichte]
 18265 Judgements first, concept second [Frege]
 5375 We know either judgements, or things [Russell]
 21711 Beliefs use the parts of propositions [Russell]
 5427 Truth is correspondence to a complex unity [Russell]
 21725 Judge the ingredients, not the propositions [Russell/Whitehead]
 18275 It needs a judgement to complete meaning [Russell/Whitehead]
 17613 Sciences precede their principles [Zermelo]
 13980 Judgments must be coherent propositions [Ryle]
 7535 Belief and judgement may be the same thing [Monk]
 12608 Concepts are tied to rationality [Peacocke]
 13239 Judgement is always basic predication [Beall/Restall]

b. Error

2284 Error is my will exceeding the understanding [Descartes]
 5007 Inaccurate perception causes most errors [Descartes]
 4841 Reason doesn't actually make errors [Spinoza]
 21542 What are the objects of false judgements? [Russell]
 5425 Beliefs must be about complex things [Russell]
 6097 Must non-existence exist to explain error? [Russell]
 6443 Surprise is a criterion of error [Russell]

7. Intelligence

reasoning power of the mind

16418 High intelligence and stupidity are compatible [New Sci.]
 16417 A third of IQ variety is environmental [New Sci.]

8. Human Thought

what is distinctive about the way humans think

6712 Abstraction divides humans from animals [Locke]
6393 Thought implies interpretation of speech [Davidson]
18537 All thought,including linguistic,is imagistic [Heil]
18538 Non-conscious thought may be weird [Heil]
17768 We can disengage thought from perception [Bayne]
17769 Egocentric or geocentric views of space? [Bayne]

9. Indexical Thought

thought which depends on a particular perspective

16379 'I' means differently for me and for others [Frege]
16391 Indexical thoughts are self-referential [Perry]
16390 Indexed attitudes have world, subject and time [Lewis]
18410 Indexicality relates to self-consciousness [McGinn]
18402 Action must involve indexicals [McGinn]
18403 Indexicals are facts of subjectivity [Chalmers]
18409 Indexicality is a feature of mental files [Recanati]
16354 Indexicality is closely related to singularity [Recanati]
22247 Indexicality also concerns thought [Recanati]
22248 How do we communicate indexical thoughts? [Recanati]
18424 Phenomenona do not involve the self [Brogaard]
18404 Perception is assumed to need indexicals [Cappelen/Dever]
18407 Agency doesn't need indexicality [Cappelen/Dever]
18426 All information is objective and portable [Cappelen/Dever]
18427 How to communicate contextual thought? [Cappelen/Dever]
18428 Spatial memories are not indexical [Cappelen/Dever]
18429 Beliefs focus on the world, not on us [Cappelen/Dever]

10. Rule Following

moulding behaviour or thought to fit some principle

6165 Nothing accords or conflicts with rules [Wittgenstein]
4143 You must actually obey, not think you are [Wittgenstein]
7092 Are communities sure they are rule-following? [Grayling]
4158 An inner process needs outward criteria [Wittgenstein]
19269 'Quus' means 'plus' - only up to 57 [Kripke]
19271 No rule can be fully explained [Kripke]

B. Mechanics of Thought

1. Psychology

general structure of the mind's operations

20381 Psychology reveals what is basic [Nietzsche]
6386 Psychology won't reduce to physical science [Davidson]
11045 Most psychologists are now cognitivists [Hanna]
19484 Personality is treated as five dimensions [New Sci.]

2. Categories of Understanding

mind imposes some categories onto possible experience

21759 Kant deduced categories in two ways [Kant]
19655 Describe or deduce categories of thought? [Kant]
5544 There are four categories of concepts [Kant]
5547 The categories make experience possible [Kant]
5552 Categories prescribe laws to appearances [Kant]
21986 Hegel has innumerable basic concepts [Hegel]

3. Modularity of Mind

theory of separate units of the mind/brain

7845 We all have inner servants [Proust]
22186 Modules: specialised, automatic and isolated [Fodor]
2491 Modules have distinctive characteristics [Fodor]
2495 There are five candidates for mental modules [Fodor]
2497 The mind must also balance module activity [Fodor]
2496 Blind children still talk about space [Fodor]
2498 Modules provide information for behaviour [Fodor]
2499 Broad thinking and modules are quite different [Fodor]
2500 Babies have fixed syntax patterns [Fodor]
2507 Human rationality is more than mind modules [Fodor]
2509 Modules contain specialized information [Fodor]
3171 Childhood grammar is largely accurate [Rey]
3174 Grammar has no simple link to environment [Rey]
4928 The brain is segregated but integrated [Edelman/Tononi]

4. Language of Thought

brains have an in-built private language ('Mentalese')

2605 Mentalese implies that all concepts are innate [Putnam]
2606 Mentalese cannot contain quantifiers [Putnam]
3086 Representations depend on language [Harman]
3996 Folk psychology doesn't imply mentalese [Lewis]
4874 Picture theory rivals language of thought [Dennett]

2524 Mentalese just postpones problems of content [Dennett]
8090 The language of thought resembles logical form [Fodor]
2604 Learned language is constrained by mind-power [Fodor]
3010 Beliefs have to be structured states [Fodor]
2480 Language is ambiguous, thought isn't [Fodor]
2483 Mentalese doesn't need meaning for language [Fodor]
2487 Not all thought (e.g. arithmetic) is Mentalese [Fodor]
12643 We don't think in English - it's ambiguous [Fodor]
3213 Non-verbal creatures might have mentalese [Rey]
3170 Young children are not trained in grammar [Rey]
7715 Mentalese is not a language [Lowe]
4927 Information-processing theories beg questions [Edelman/Tononi]
11121 LOT is subject/predicate and logical [Margolis/Laurence]
17767 Maybe maplike thought, and not a language? [Bayne]

5. Mental Files

mind is like a filing system, with labelled folders

17236 Words are marks to aid memory [Hobbes]
16875 Signs mark receptacles for senses [Frege]
16876 Definitions cram sense into files [Frege]
16383 Pierre has two files on one object [Recanati]
12647 Representations of things, and files on things [Fodor]
12649 We think in file names [Fodor]
16369 There is just one file per object [Papineau]
16362 Identity statements are file mergers [Lockwood]
15602 Mental files track coordination of objects [Fine,K]
16371 Two files with one name, one file with two? [Recanati]
16373 Encyclopedic files have further epistemic links [Recanati]
16375 Singular thoughts need acquaintance files [Recanati]
16377 Expected acquaintance can create a file [Recanati]
16378 We simulate other people's files [Recanati]
16387 Files use Millian direct reference [Recanati]
16358 Files refer by relations, not contents [Recanati]
16361 Mental files focus on single objects [Recanati]
16367 Demonstrative, recognitional, encyclopedic... [Recanati]
16368 Files are hierarchical [Recanati]
16370 A file has a 'nucleus' and a 'periphery' [Recanati]
22242 Files concepts which contain elements [Recanati]
22243 Mental files explain Frege Cases [Recanati]

6. Artificial Thought

implementing thought in a non-living system

a. Artificial Intelligence

7651 A speaking machine is a possibility [La Mettrie]
8056 AI can't avoid massive unpredictability [MacIntyre]
7654 Brain chemistry has a key functional role [Dennett]
3135 Content is both syntactic and semantic [Fodor]
12655 How to eliminate what is irrelevant? [Fodor]
3215 Models require mental computation [Rey]
3194 More than deduction is needed for reason [Rey]
6655 How do we program knowledge application? [Lowe]
6657 Reason needs motivation and curiosity [Lowe]

b. Turing Machines

3193 Turing showed that logic could be physical [Turing]
3979 Turing Machine is a brilliant idea about mind [Fodor]
3498 Computation is relative not natural [Searle]
2577 Pure functionalism makes mind a Turing machine [Block]
2580 Turing machines have just three requirements [Block]

c. Turing Test

3614 Machines may speak, but not hold conversation [Descartes]
5321 Computers will 70% imitate humans [Turing]
3383 The Turing test requires too much humanity [Kim]
3382 Cats couldn't pass the Turing test [Kim]
3178 A machine might just use a vast lookup table [Block]
6656 The test is too behaviourist and too verbal [Lowe]

C. Content

1. Content

how minds internally represent reality

3629 All ideas are adventitious and sense-based [Gassendi]
21541 Object and content complexity correlate [Russell]
6164 Sartre rejects mental content [Sartre]
3492 Content is more than literal sentence meaning [Searle]
6977 Egocentric content is irreducibly so [Jackson]
4889 An idea can be fixed, but its content change [Perry]
3984 Content is fixed by function [Dennett]
3708 Thought is of properties or indexicals [Bonjour]

2983 Fodor aims to explain narrow content [Lyons]
3012 Same content isn't same causal role [Fodor]
2432 Content reduces to external information [Fodor]
2452 Contents of thoughts includes their causes [Fodor]
2486 Content fixes function, not vice versa [Fodor]
3115 Word-meaning and concepts may differ [Burge]
3147 People rotate mental images [Rey]
3175 Animals must represent and remember times [Rey]
2977 Thinking is always about something [Lyons]
15588 Thought content is partly relational [Fine,K]
2536 Is truth integral, intentional or causal? [Sturgeon]
6636 Causal and teleological theories of content [Lowe]
3118 If concepts are causes they don't explain them [Segal]
3119 Causal powers depend on context [Segal]
7637 Content needs either satisfaction or concepts [Maund]
6168 Thought-content is sentence-meaning [Rowlands]
16381 Thought content rests on understanding [Recanati]
18035 Two meanings with same content? [Magidor]
19264 Aboutness is intended, never accidental [Vaidya]

2. Ideas

mental events which internally represent reality

5685 True ideas are images [Descartes]
21807 Ideas have a power to produce more ideas [Spinoza]
4830 Ideas are mental conceptions [Spinoza]
4842 Ideas are the conceptions of thought [Spinoza]
20311 Ideas involve affirming and denying [Spinoza]
6486 Ideas are any objects of understanding [Locke]
15967 My 'ideas' mean three different things [Locke]
12496 Simple ideas build complex ideas [Locke]
19423 'Ideas' are resources for thinking [Leibniz]
19427 True ideas represent what is possible [Leibniz]
12938 Ideas are independent inner objects [Leibniz]
12945 Thoughts involve senses, ideas don't [Leibniz]
19357 The idea of green is a compound idea [Leibniz]
12950 Images and ideas are different [Leibniz]
5374 Berkeley used 'idea' for thing and act [Russell]
12615 Uses 'Ideas', but minus the images [Fodor]
5636 Are 'ideas' concepts or propositions? [Scruton]

5. Twin Earth

we may not know what we mean by 'water'

4099 Thoughts can differ in identical brains [Putnam]
12026 'Water' is liquid, H2O may not be [Forbes,G]
3208 Early users of "water" really meant H2O [Putnam]
14200 'Water' referring differently isn't mental [Putnam]
2343 'Water' is a substance, not an idea [Putnam]
6990 'Water' usage and essence of water differ [Jackson]
3408 Content may vary purely with environment [Kim]
3420 Two sorts of water don't affect behaviour [Kim]
15226 Type criteria can be laid down a priori [Harré/Madden]
2437 XYZ is simply impossible [Fodor]
12630 H2O and XYZ don't co-refer [Fodor]
17378 Nothing is like water, so structure rules! [Dupré]
4100 Twin Earth has a bad theory of reference [Crane]
6633 Twin Earth suggests all beliefs are indexical [Lowe]
3108 Concepts cover both Earth and Twin Earth [Segal]
3110 Twin Earth is impossible in actual chemistry [Segal]
3124 What is the extension of pre-scientific terms? [Segal]
15168 Water is H2O is a convention [Sidelle]
17873 Water needs relations, as tigers do [Almog]
14706 Two separate viewpoints on 'water' [Schroeter]

6. Broad Content

meanings aren't in the head ('Externalism')

12995 'Gold' refers to many facts we don't know [Leibniz]
12807 'Gold' means what experts mean [Leibniz]
7531 We assert public, not private, objects [Russell]
7055 Externalism began in Wittgenstein [Wittgenstein]
4138 Is white simple or the colours of the rainbow? [Wittgenstein]
9168 I can refer to 'elms' despite ignorance [Putnam]
5820 The word 'water' has an indexical component [Putnam]
7612 Our reference to elms defers to experts [Putnam]
6175 External identification isn't outer location [Davidson]
8872 Externalism undermines 1st person authority? [Davidson]
8874 Broad content won't explain behaviour [Davidson]
3974 Meanings are partly fixed externally [Davidson]
3464 There is no 'wide content' [Searle]

3416 Meaning as covariance is inadequate [Kim]
3418 Content depends on linguistic culture [Kim]
3421 Contents are truth conditions [Kim]
16428 Insensations are external, because abstract [Stalnaker]
16474 Our content rests on our ignorance? [Stalnaker]
3998 Do brains-in-vats share our beliefs? [Lewis]
3997 Nothing supports the priority of wide content [Lewis]
3999 Do duplicates with no experience have beliefs? [Lewis]
4000 Wide content derives from narrow content [Lewis]
8248 Thought is part of the world [Deleuze/Guattari]
2441 Meaning must be broad to permit truth [Fodor]
3982 How can extrinsic properties match intrinsic? [Fodor]
7884 Reductive representation implies broadness [Papineau]
7863 How can broad content influence actions? [Papineau]
3207 Simple externalism equates meaning and object [Rey]
4067 Broad content entails existence [Crane]
7058 Causal, social or biological externalism? [Heil]
3758 External content avoids massive error [Bernecker/Dretske]
4922 Consciousness is partly external [Edelman/Tononi]
3104 Do concepts need relations to objects? [Segal]
3103 Content partly depends on other people [Segal]
3109 Externalist meaning applies to belief & desire [Segal]
3111 Externalism struggles with empty concepts [Segal]
3116 Concepts are fixed by experts [Segal]
3117 Concepts persist through extension changes [Segal]
19300 Molecules explain; they don't give meaning [Hale]

7. Narrow Content

meaning is inside the mind ('Internalism')

3506 We explain behaviour by real internal content [Searle]
3417 Beliefs depend on beliefs as well as the world [Kim]
3419 Some beliefs have no external element [Kim]
2999 Narrow content is undefinable [Fodor]
3114 Concepts are causally linked to reality [Fodor]
7057 Intentionality is disposition - so internalism [Heil]
3121 If content is narrow, twins have same content [Segal]
6146 God could think before Creation [Merricks]
6147 Solipsism is not an incoherent hypothesis [Merricks]
14711 Internal states fix extensions? [Schroeter]

8. Intension

way a set of things is conceived

5828 Intension determines extension [Lewis,CI]
4896 Intensions link possible worlds to extensions [Perry]
5826 Intension is a conjunction of properties [Schwartz,SP]
4063 Intensional truth depends on conception [Crane]
10408 Intensions are functions mapping expressions [Swoyer]

D. Concepts

1. Concepts

general ideas about the components of thought

a. Nature of concepts

20804 Concepts are intellectual phantasms [Stoic school]
12911 Concepts unite propositions [Leibniz]
17616 Grasping experience requires concepts [Kant]
5553 Do concepts or experiences come first? [Kant]
5593 Reason frees concepts, but can't generate them [Kant]
20953 All concepts depend on contrary concepts [Hegel]
15607 We think concepts, not 'with' concepts [Hegel]
15610 Universal concepts are the essences of things [Hegel]
8715 Explore concepts to explore conceivability [Cantor]
9870 Extensions of concepts can be assumed [Frege]
5384 Concepts are universals of which we are aware [Russell]
16366 Predicates can be applied to anything [Evans]
8245 Concepts are forces, not functions [Deleuze/Guattari]
13865 Sortals require grasping identities [Wright,C]
13866 True sortals must give identity [Wright,C]
16535 Concepts are ways of thinking of things [Lowe]
10110 Every concept has a class [George/Velleman]
10344 The world itself is not conceptual [Kusch]
17980 Exemplar, prototype, knowledge concepts [Murphy]
16365 Mental files are individual concepts [Recanati]
8688 Extensional and intensional views of concepts [Friend]
19088 A concept means its consequences? [Macbeth]
18574 Different concepts in categories and induction [Machery]
18588 Concept theories have five targets [Machery]
18611 We should abandon the term 'concept' [Machery]

11120 Concepts represent, enable, or are senses [Margolis/Laurence]

b. Concepts in philosophy

18568 Philosophy says when we have a concept [Peacocke]
18571 Counterfactuals reveal concept-possession [Peacocke]
18572 Peacocke is chauvinist and vague [Machery]
18567 Concepts are parts of thoughts [Machery]
18569 Explain content for propositional attitudes [Machery]

c. Concepts in psychology

22004 Concepts are rules of combination [Kant]
5543 Human cognition requires concepts [Kant]
18563 Psychology concepts:representations/structures [Machery]
18557 Psychologists' concepts are longterm knowledge [Machery]
18558 Five aims of the theory of concepts [Machery]
18560 Psychologist treat concepts as categories [Machery]
18564 Categories know causal,properties,individuals? [Machery]

2. Origin of Concepts

how concepts come into existence

a. Origin of concepts

19372 Ordered concepts derive from God [Leibniz]
16912 We can make general concepts a priori [Kant]
19633 Having a concept masters our fear [Cioran]
10645 Concepts: clarify, define, or habit [Price,HH]
8781 Minds create concepts, then apply them [Geach]
11859 Objects impinge upon the mind [Wiggins]
12658 Nobody knows how concepts are acquired [Fodor]
17722 The concept 'red' is tied to real red [Peacocke]
5793 Concepts result from brain mapping [Edelman/Tononi]
4926 Concepts arise from self-mapping by the brain [Edelman/Tononi]

b. Empirical concepts

12475 Sensation and reflection create ideas [Locke]
17735 External things produce our concepts [Locke]
21921 Concepts are abstracted from perceptions [Schopenhauer]
21475 Our concepts come from perceptual knowledge [Schopenhauer]
16518 Objects impinge on us, prior to concepts [Wiggins]
17710 Concepts are abstracted from experience [Mares]
17718 Our grounded concepts map the world [Jenkins]
17739 The physical world causes our concepts [Jenkins]

c. Nativist concepts

2273 Ideas of God and the self are innate in me [Descartes]
2285 Not all geometry can have come by sensing [Descartes]
2286 The idea of God is discovered within me [Descartes]
3631 Blind men may contain the idea of colour [Descartes]
2600 Descartes denies wholly innate ideas [Descartes]
2601 Perception requires innate ideas to work [Descartes]
12471 Unknown innate ideas are meaningless [Locke]
8100 Whence does the idea of a bird's nest come? [Joubert]
6649 Both concepts and syntax are innate [Chomsky]
11143 A hypothesis needs innate concepts [Fodor]
6650 Fodor has now rejected innate concepts [Fodor]
2492 Explanation requires some innate concepts [Fodor]
12662 Getting concepts from stereotypes is innate [Fodor]
4997 Concepts innate if a theory is needed? [Kirk,R]
18592 The concepts OBJECT or AGENT may be innate [Machery]

3. Ontology of Concepts

whether concepts are a part of the actual world

a. Concepts as representations

11873 Things themselves form our concepts [Leibniz]
12618 Cats must satisfy a concept CAT [Fodor]
12635 Having a concept is thinking about it [Fodor]
12652 Concepts face both thought and world [Fodor]
11127 Not all concepts get represented [Peacocke]
15686 Labels may show essential categories [Gelman]
11122 Attitude without representation seems possible [Margolis/Laurence]
11124 Mental representations produce a regress [Margolis/Laurence]

b. Concepts as abilities

14792 'Concepts' rest on the conduct of life [Peirce]
18975 Concepts show us differences in experience [James]
12576 Concept possession is ability to go on [Wittgenstein]
4157 Concepts express our interests [Wittgenstein]
12606 Memory gives us the concept of past [Wittgenstein]
10731 Concepts are recognition capacities [Geach]
7613 Concepts are abilities, not occurrences [Putnam]
12575 Knowing concepts involves generalising [Evans]
2438 Meaning is possibilities, not actualities [Fodor]
12614 Our concepts don't depend on capacities [Fodor]

2471 Concepts are epistemic capacities [Fodor]
2472 For Pragmatists concepts are abilities [Fodor]
12626 Concept individuation or possession prior? [Fodor]
12577 Judgements show concept-possession [Peacocke]
12578 Concepts are possession-conditions [Peacocke]
12587 Judgement reveals what concepts we have [Peacocke]
11123 Concepts enable discrimination and inference [Margolis/Laurence]
11125 The abilities view offers little explanation [Margolis/Laurence]

c. Fregean concepts

13878 Concepts are references of predicates [Frege]
7736 A concept is a one-place function [Frege]
17430 Concepts are precise, and universal [Frege]
8622 Truth dies if concepts are psychological [Frege]
9947 Concepts are the ontology of predicates [Frege]
10319 We use objects to speak of concepts [Frege]
8488 A concept is a function [Frege]
18752 'The concept "horse": concept or object? [Frege]
9839 Properties are applicable concepts [Frege]
9190 Concept map onto truth-values [Frege]
13665 The study of concepts is part of logic [Frege]
19168 Concepts only resemble functions [Dummett]
11836 Concept/conception for reference/sense [Wiggins]
12637 Do concepts have a 'sense'? [Fodor]
12638 Concepts senses block causal powers [Fodor]
12639 Sense don't explain mental processes [Fodor]
12605 Senses are individuated by reference [Peacocke]
12607 Concepts fixed by reference-conditions [Peacocke]
13475 Fregean concepts assign true and false [Hart,WD]

4. Structure of Concepts

components that make up a concept

a. Conceptual structure

9948 Concepts are inherently incomplete [Frege]
12654 'Brown dog' needs 'brown' and 'dog' [Fodor]
12609 Concepts have distinctive reasons and norms [Peacocke]
15690 Causal properties are central to categories [Gelman]
18566 Concepts are working, and control behaviour [Machery]
18584 Concepts as definition plus prototype? [Machery]
18585 Can concept judgements be conflicting? [Machery]
18578 There are three main theories of concepts [Machery]
11140 Concept-structure explains five problems [Margolis/Laurence]

b. Analysis of concepts

8735 Kant implies concepts have parts [Kant]
14793 Concepts are just experimental implications [Peirce]
21214 Find a concept's psychological origin [Husserl]
12621 Concept complexity has implications [Fodor]
12584 Concept-analysis needs non-concepts [Peacocke]
12604 Concept-explanation needs reference and truth [Peacocke]
13890 Identity decides extensions of concepts [Wright,C]
4455 Unanalysability is always possible [Moreland]
18575 Class concepts contain many types [Machery]
18018 Knowing 2 is knowing it isn't green? [Magidor]

c. Classical concepts

6985 Study possible cases to analyse conditions [Jackson]
17706 Concepts as definitions, or as relations? [Mares]
17969 The classical view misses typical/atypical [Murphy]
17970 Concepts don't follow basic logic [Murphy]
17971 Some categories are used intransitively [Murphy]
17972 The classical core is actually marginal [Murphy]
17973 Defining concepts is just too tough [Murphy]
18590 Classical processing times don't occur [Machery]
18591 Classical theory is weak on explanation [Machery]
18583 Many categories have no definition [Machery]
11128 Concepts give extension conditions [Margolis/Laurence]
11129 Classical theory explains a lot [Margolis/Laurence]
11130 Typicality challenges the classical view [Margolis/Laurence]
11131 Maybe concepts lack structure [Margolis/Laurence]

d. Concepts as prototypes

12622 Prototypes don't compose [Fodor]
12659 Stereotypes are a stage in concept learning [Fodor]
12660 One stereotype for two different concepts? [Fodor]
15688 Category is by distance from a prototype [Gelman]
17975 Prototypes are narrow and uninformative [Murphy]
17976 Prototypes are unified representations [Murphy]
18691 Prototype theory lacks concept construction [Murphy]
17983 Prototypes good on categories and combinations [Murphy]

17985 Prototypes of best, as full descriptions [Murphy]
17986 Combine prototype and knowledge theories? [Murphy]
18594 Typicality is useful in induction [Machery]
18593 'Prototype': typicality or representation? [Machery]
18595 Prototype theories rely on computation [Machery]
18596 How do we select the right prototype? [Machery]
18603 Concepts are ideal, rather than typical? [Machery]
18605 Presumably prototypes are remembered? [Machery]
18606 Are typical items easier to categorise? [Machery]
11134 Categorising involves more than appearance [Margolis/Laurence]
11136 Complex concepts may lack prototypes [Margolis/Laurence]
11135 Basic prototypes won't explain complexes [Margolis/Laurence]
11133 Shared constituents create categories [Margolis/Laurence]
11132 Select a thing if it has sufficient properties [Margolis/Laurence]

e. Concepts from exemplars

10409 Concepts rely on typical examples [Swoyer]
17974 Concepts rest on prototypes or exemplars [Murphy]
17977 'Dogs' means the dogs I remember [Murphy]
17982 Categories and induction don't fit exemplars? [Murphy]
17981 Essentialism doesn't fit exemplar concepts [Murphy]
17984 Exemplars can't handle combining concepts [Murphy]
17987 Exemplars must be usable in induction [Murphy]
18597 Exemplars rely on properties of particulars [Machery]
18598 Which properties do exemplars use? [Machery]
18599 People actually rely on known examples [Machery]

f. Theory theory of concepts

8791 'Green' involves many other concepts [Sellars]
16511 'Conception' is a fuller theory than 'concept' [Wiggins]
12623 Theory theory offers no explanation [Fodor]
9335 Concepts are roles in groups of propositions [Peacocke]
15689 Use knowledge to prioritise similarities [Gelman]
17978 We learn concepts as part of knowledge [Murphy]
18687 Familiar content eases concept learning [Murphy]
18688 Concepts have two kinds of knowledge [Murphy]
18689 Knowledge strongly supports our categorisation [Murphy]
18587 Theory views like knowledge and explanation [Machery]
18600 Concepts are explanatory knowledge stores [Machery]
18601 Concepts are explanations, in domains [Machery]
18607 Classify by explanation, not by similarities [Machery]
18608 Categorise by possibilities, not similarities? [Machery]
11137 Concepts are defined by a role in a theory [Margolis/Laurence]
11138 Concepts will vary if the theory is holistic [Margolis/Laurence]

g. Conceptual atomism

12131 Derive all concepts from basics [Carnap]
12629 Concept content is just the reference [Fodor]
12631 Compositionality needs atomic concepts [Fodor]
11139 Relations to the world determine concepts [Margolis/Laurence]

h. Conceptual priority

10954 Are parts prior to their wholes or not? [Aristotle]
9849 Maybe order of definition decides priority [Dummett]
9850 Greater simplicity shows conceptual priority [Dummett]
10746 Conceptual priority is barely intelligible [Oliver]

5. Concepts and Language

relationship between concepts and language

a. Concepts and language

8155 Without speech we could make no distinctions [Anon (Upan)]
19758 Thought comes before language [Rousseau]
7084 Language shows the limits of thought [Wittgenstein]
11144 Concepts need a language community [Davidson]
12592 Concepts have content, not meaning [Harman]
18577 'Grandmother' might be two concepts [Machery]

b. Concepts are linguistic

8651 Concepts are possible predicates [Frege]
4973 A concept is a predicate's meaning [Frege]
11104 Concepts are language [Quine]
4882 Language reifies concepts [Dennett]
18589 Concepts just link items to names [Machery]

c. Concepts without language

8769 Chess-playing aphasiacs have concepts [Geach]
2529 Concepts do not require consciousness [Dennett]
15699 Prelinguistic infants use categories [Gelman]
11146 Concepts can be formed, and then named [Margolis/Laurence]

E. Abstraction

1. Abstract Thought

general concepts not about concrete objects

9569 Geometry is sensation, calculation, reason [Proclus]
10503 We abstract the immaterial from matter [Aquinas]
10509 Understanding requires abstractions [Aquinas]
5827 Species words refer to abstract ideas [Locke]
6925 Think of the concrete concretely [Feuerbach]
9078 Studying abstracta is not part of logic [Mill]
9080 Induction needs general conceptions [Mill]
9846 Is direction a line [Dummett]
9030 Abstracta enable recognition and imagination [Price,HH]
9029 If ideas are images, abstractions are a puzzle [Price,HH]
11102 Apply 'class of' to get the second level [Quine]
17664 A subject has a level of abstraction [Armstrong]
10839 Behaviour won't reveal abstract concepts [Dummett]
9873 Abstract terms just need linguistic licence [Dummett]
9086 'Abstracta' are epistemological, not ontic [Plantinga]
9087 Abstract objects are God's thoughts [Plantinga]
8901 Abstraction has four possible explanations [Lewis]
9144 Postulating mathematics avoids abstractions [Fine,K]
9609 'Abstract' used to mean 'from particulars' [Brown,JR]
9611 'Abstract' now means non-spatio-temporal [Brown,JR]
8299 Three different types of abstraction [Lowe]

2. Abstracta by Selection

mental acts which create abstract concepts

9789 You can't abstract natural properties [Aristotle]
9070 Perception creates universals by induction [Aristotle]
10506 Abstract gets maths from most matter [Aquinas]
9104 Universals result from mental picturing [William of Ockham]
19577 We abstract, and then we reunify [Novalis]
13454 Abstract numbers from equal sized sets? [Hart,WD]
9145 We doubly abstract to create cardinals [Cantor]
9976 Frege needs abstraction for his ultimate set [Tait]
9361 We abstract mathematics from the physical [Lewis,CI]
10644 Familiarity of universals precedes abstraction [Price,HH]
10646 Repetition of concomitance creates 'dog' [Price,HH]
9031 Basic concepts are abstracted from instances [Price,HH]
10557 Second-order logic with encoding for abstracta [Zalta]
12657 Instances give criteria for what is shared? [Fodor]
9149 Just abstract distinctness to get numbers [Fine,K]
9150 Number abstraction is just a special case [Fine,K]
10141 Many maths objects are abstracted [Fine,K]
9982 Abstraction can fix grammar and objects [Tait]
9981 Logical abstraction links sense and truth [Tait]
9919 Abstract representations, or entities? [Burgess/Rosen]
10229 Abstract simple types from tokens? [Shapiro]
8917 Abstractions are ideas formed by abstracting [Rosen]

3. Abstracta by Ignoring

creating abstractions by ignoring some features

9788 Maths properties are separable and reliable [Aristotle]
9792 Maths removes perceptible features of things [Aristotle]
9077 Suppose what is not separable to be separable [Aristotle]
9094 Mathematical objects abstract from matter [Aquinas]
10505 Apple colour is non-apple, so abstractable [Aquinas]
10504 Real separation, or think of separately? [Aquinas]
10507 Numbers and shapes are abstracted by ignoring [Aquinas]
13186 Universals are merely mental abstractions [Leibniz]
9189 Dedekind abstracts pure position from objects [Dedekind]
9827 Abstract distinctness and order for number [Dedekind]
10803 Frege abstracts from tone and color [Yablo]
9988 Abstractions from cats are not cats [Tait]
9579 How do totally abstracted cats differ? [Frege]
9587 How do we find the right level of inattention? [Frege]
9890 Reals are detached from geometry ratios [Frege]
8770 Abstractionism makes concepts by selection [Geach]
8904 Abstractions are incomplete descriptions [Lewis]
9567 Maths deals with quantity, ignoring the rest [Geroch]
8612 Abstraction concerns parts of things [Campbell,K]
9626 Structures are abstractions of relationships [Shapiro]
10217 Focusing or ignoring detects structures [Shapiro]
9554 We observe relations, ignoring other features [Shapiro]
17316 We can grasp dependence by abstraction [Koslicki]

4. Abstracta by Example

defining abstract entities by offering examples

8938 How exactly do donkeys and numbers differ? [Lewis]
9917 Numbers, functions, sets are abstract [Field,H]

5. Abstracta by Negation

defining abstractions by specifying what they are not

4039 Abstractions have no causation or location [Mellor/Oliver]
4237 Abstractions have no causal powers [Lowe]
4238 A centre of mass is abstract but located [Lowe]
8912 Abstracta are non-spatial and non-causal [Rosen]
8913 Abstract chess is in space and time [Rosen]
8914 A non-spatial set of books is on a shelf [Rosen]
8955 Abstracta: imperceptible, non-causal, non-spat [Szabó]

6. Abstracta by Conflation

treating abstractions as actually sets or universals

8902 Some abstracta have locations [Lewis]
8903 Sets and universals can be causal [Lewis]
8906 How do we abstract extrinsic features? [Lewis]
8905 Abstraction might pick out tropes/universals [Lewis]
8916 Abstractions as sets/universals is too much [Rosen]

7. Abstracta by Equivalence

defining abstraction by the principle of equivalence

9855 Abstraction is maximal equivalence sets [Frege]
10802 We grasp 'parallel' before 'direction' [Yablo]
10526 Abstraction is equivalences between items [Frege]
10525 Frege first made abstraction rigorous [Frege]
10556 We create abstract concepts by recarving [Frege]
9882 Which first, truth-conditions or domain? [Dummett]
9881 Frege based abstraction on identity [Frege]
10583 Abstraction identifies a new related term [Russell]
10582 Symmetrical, transitive relations are identity [Russell]
10584 Certain properties iff equivalence relation [Russell]
10549 Abstracta need identity statements [Dummett]
9993 Why is equivalence abstraction 'logical'? [Dummett]
9857 'Suicide' is the set of self-killing cases [Dummett]
8693 Abstraction asserts equivalence as identity [Bools]
8907 We can abstract by taking equivalence classes [Lewis]
8908 Equivalence too artificial for abstraction [Lewis]
15443 Mathematical equivalence won't make a unity [Lewis]
13898 If directions emerge, they were there waiting [Wright,C]
10630 Abstract objects just depend on entities [Hale/Wright]
8786 An abstraction principle defines 'direction' [Hale/Wright]
12227 Uniform truth-conditions are needed [Hale/Wright]
12228 Abstraction reveals new objects [Hale/Wright]
9142 Abstraction is reconceptualization of sense [Fine,K]
10135 Abstraction is 'conceptual' or 'objectual' [Fine,K]
10137 Abstractionism is an alternative to set theory [Fine,K]
10138 Abstract from concepts by relations [Fine,K]
10561 Can Fregean abstracts cover all maths? [Fine,K]
10562 Combine ZF with abstracts as urelements [Fine,K]
10567 Create objects from conditions, not concepts [Fine,K]
10527 We don't want more abstracta than objects [Fine,K]
9985 Abstract from the set, not its elements? [Tait]
10805 Sentences should be recarved for clarity [Yablo]
10231 Abstract objects from equivalence classes [Shapiro]
9568 Reject the platonist idea of equivalence class [Chihara]
8306 A real direction requires a line [Lowe]
8918 Equivalence functions assert abstractions [Rosen]
8919 Beware of trains turning out abstract! [Rosen]
18883 Any equivalence of features is abstractable [Simons]
18884 Abstraction has wide application in philosophy [Simons]
9141 Abstraction uses second-order principles [Cook/Ebert]

8. Abstractionism Critique

reasons to reject the abstractionist explanation

9075 We focus on the relevant properties of things [Aristotle]
15385 Can singular things explain abstraction? [Panaccio]
9096 The mind creates the image of each species [Aquinas]
8638 Peculiarities aren't lost when we count [Frege]
9979 Abstractionism need not be psychologistic [Dedekind]
5816 Concepts are abstractions, not mental [Frege]
9588 Make objects identical without changing them! [Frege]
11846 Does abstracting difference make identity? [Frege]
9819 Explain the concept, not its formation [Dummett]
9851 Abstractionism can't retain a shadowy remnant [Dummett]
8771 'Or' and 'not' are not found in experience [Geach]

8772 Numbers cannot be 'abstracted' from objects [Geach]
 8773 Counting must precede object-experience [Geach]
 8774 There are no numbers to abstract from nature [Geach]
 8778 The blind can use colour concepts [Geach]
 8777 We apply 'cat' when cats are absent [Geach]
 8779 Two concepts for same experience! [Geach]
 10733 Explain 'some' and 'not!' [Geach]
 10734 Judgement separates striking/being struck [Geach]
 9833 Total abstraction destroys distinction [Dummett]
 8165 Abstraction is logical, not mental [Dummett]
 16289 Abstraction needs a reality as its base [Lewis]
 9074 Abstraction fails if there's no common feature [Barnes,J]
 9072 Abstraction collects too many attributes [Barnes,J]
 9073 Abstraction cannot distinguish ambiguities [Barnes,J]
 9146 Abstractionism only allows 0 and 1! [Fine,K]
 9972 Why would two abstractions coincide? [Tait]
 9980 How can abstraction create new sets? [Tait]

19. Language

A. Nature of Meaning

1. Meaning

how one thing can represent another thing

19087 Meaning is resulting rational conduct [Peirce]
 6112 Meaning varies its nature by logical type [Russell]
 13978 We need Meanings, as subjects for Logic [Ryle]
 1626 Truths don't have factual and linguistic parts [Quine]
 8898 Teaching meanings rests on sensations [Quine]
 6282 Meaning assumes understanding and reference [Putnam]
 2346 Reference precedes meaning and truth [Putnam]
 15667 Meaning is acceptability conditions [Habermas]
 21932 'Difference' is the history of each sign [Derrida]
 21886 Meaning results from differences [Derrida]
 21930 Traditional nouns needed a single sense [Derrida]
 21884 Repetition is the essence of language [Derrida]
 21933 Writing needs no sender or receiver [Derrida]
 21935 Signs are movements between presences [Derrida]
 21894 Language contains unstable madness [Derrida]
 6387 Theories of meaning must cover truth [Davidson]
 2565 There isn't a right way to represent nature [Rorty]
 3451 Meaning is derived intentionality [Searle]
 3078 Theories of meaning nest into one another [Harman]
 13948 Numerous meanings can make one statement [Cartwright,R]
 13950 People don't assert word meaning [Cartwright,R]
 2517 Is language behaviour or inner structure? [Katz]
 16406 The said and the meant must match up [Stalnaker]
 2439 Broad content need no beliefs or inferences [Fodor]
 2457 Meaning as information makes truth possible [Fodor]
 7324 Meaning in terms of mind, or vice versa? [Miller,A]
 19217 Being about something isn't a relation [Merricks]
 21654 "Fido"-Fido: all language is referential [Hofweber]
 14717 Internal understanding, or external embedding? [Schroeter]

2. Meaning as Mental

meanings are essentially mental events

2337 In Aristotle concepts give meaning & reference [Aristotle]
 7716 Words mean private ideas [Locke]
 7308 Words stand for the ideas in the mind [Locke]
 6716 Names stand for ideas [Berkeley]
 9167 Meanings are abstract, not mental [Frege]
 9583 Psychology studies sense, maths reference [Frege]
 9584 If identity is psychological it is baffling [Frege]
 18283 Language pictures the essence of the world [Wittgenstein]
 8212 All experience is meaning [Derrida]
 19149 Denying facts is also denying representations [Davidson]
 3450 Language is an aspect of the mind [Searle]
 7013 Can we read reality from our language? [Heil]
 7722 How to picture 'cat NOT on mat'? [Lowe]

3. Meaning as Speaker's Intention

meaning is what speaker's want to communicate

5280 Language and consciousness are linked [Marx/Engels]
 13977 Sentences reveal meanings and mental states [Ryle]
 7751 Meaning needs spotting speakers' intentions [Grice]
 7752 Meaning concerns primary intentions [Grice]
 7753 Linguistic intentions are like non-linguistic [Grice]
 15668 Meanings are fixed intersubjectively [Habermas]

2998 Spoken intentions from propositional attitudes [Fodor]
 2482 Meaning won't reduce to speaker's intentions [Fodor]
 4690 Reduce meaning to propositional attitudes [McGinn]

4. Meaning as Truth-Conditions

meaning is the situation making a sentence true

7307 A thought is a condition of the world [Frege]
 4980 Sentence-meaning is its truth-value [Frege]
 8172 Truth conditions give meaning of propositions [Wittgenstein]
 18725 Propositions pick out facts that agree with it [Wittgenstein]
 6281 Truth conditions also need explanation [Putnam]
 6278 Truth is not prior to meaning [Putnam]
 19055 Truth-conditions are just paraphrases [Dummett]
 19056 What are truth conditions for undecidables? [Dummett]
 8168 Judging truth-conditions presupposes meaning [Dummett]
 15160 Truth and reference, and dump meaning [Davidson]
 14612 Language is based on first-order logic [Davidson]
 4041 Beliefs determine word meaning [Davidson]
 6391 Truth explains linguistic communication [Davidson]
 19152 Truth conditions are intended by speakers [Davidson]
 19163 To understand an order, know how to obey it [Davidson]
 18418 'De se' gives relative truth conditions [Lewis]
 3006 Falsehood is parasitic on truth [Fodor]
 2451 Content of thoughts includes truth conditions [Fodor]
 6338 We can know truth-conditions and not meaning [Horwich]
 15152 Study truth conditions, syntax, representation [Soames]
 15153 Tarski's truth conditions are too weak [Soames]
 7768 Truth conditions meanings are representations [Lycan]
 4605 Truth-conditions are 'literal meanings' [Heil]
 18992 Truth-conditions, plus causes of them! [Yablo]
 19203 Truth conditions depend on context [Merricks]
 18697 Truth conditions are all the truth situations [Button]
 14000 Must truth-conditions first select an object? [Markosian]
 19074 Truth-conditions as reality, or as propositions [Young,JO]
 19082 Coherentism: truth-conditions must be known [Young,JO]
 18817 Conditionals work without truth-conditions [Rumftt]

5. Meaning as Verification

meaning is tied to observation and verification

14906 Hypotheses must be founded and testable [Ladyman/Ross]
 13468 Russell started philosophy of language [Russell]
 5388 Acquaintances make all understood propositions [Russell]
 6427 Unverifiable propositions have truth-value [Russell]
 10117 Contradiction, but also unjustified assertion [Brouwer]
 7086 Science is possible, metaphysics lacks meaning [Wittgenstein]
 18282 Belief needs possible verification [Wittgenstein]
 18728 Proposition meaning is verification mode [Wittgenstein]
 4150 Verification is only one aspect of meaning [Wittgenstein]
 5181 Meaningful sentences are verifiable [Ayer]
 5184 Factual propositions imply experiences [Ayer]
 5186 Only tautological and empirical are meaningful [Ayer]
 5164 Meaning needs possible observations [Ayer]
 5165 Meaning entails possible observations [Ayer]
 5166 The VP is not factual, but a definition [Ayer]
 8181 Justificationist meaning kills classical logic [Dummett]
 8182 Ideal verificationism could be realist [Dummett]
 8183 Verificationism implies the past changes [Dummett]
 8193 Verification is a collective activity [Dummett]
 4564 I can speculate about new types of experience [Cooper,DE]
 4565 Is verifications analytic or verifiable? [Cooper,DE]
 2744 Verificationism is a form of anti-realism [Dancy,J]
 2760 Foundationalism mirrors logical positivism [Dancy,J]
 3007 Verification has excess connections to meaning [Fodor]
 7883 Hard questions don't make indefinite answers [Papineau]
 13410 Verificationists can't deny theories [Papineau]
 4999 Language is just a type of behaviour [Kirk,R]
 2971 Logical positivism blurs science & metaphysics [Lockwood]
 13882 Some evidence of understanding is needed [Wright,C]
 3181 Indirect verification allows almost anything [Rey]
 7766 Meaning must precede verification [Lycan]
 10060 Logical positivists relied on If-thenism [Musgrave]
 4710 No analytic/synthetic, no distinct 'facts' [O'Grady]
 9134 Verify negations of meaningful sentences? [Sorensen]
 5748 Unverifiable propositions have many uses [Melia]
 17731 Concepts, not propositions, must be verifiable [Jenkins]

6. Meaning as Use

meaning of language is its use

20949 Study the use of words, not their origins [Herder]
 16879 Signs can't get sense just from being used [Frege]
 6567 Meaning is use, in chess and in language [Wittgenstein]
 4137 The meaning of words is their use [Wittgenstein]
 6169 We understand in the world, not in heads [Wittgenstein]
 4155 In use it is obvious how sentences represent [Wittgenstein]
 8356 Meaning is use-directions, to refer or assert [Strawson,P]
 2354 'Meaning is use' doesn't define meaning [Putnam]
 15666 Language is used, for shared understandings [Habermas]
 19054 Usage seems uncriticisable and holistic [Dummett]
 8176 True/false is only grasped through use [Dummett]
 6395 Understood sentences have many uses [Davidson]
 19162 Sentences have many uses [Davidson]
 4562 We use 'Amen' but don't know its meaning [Cooper,DE]
 4563 Elocution sentences differ in use & meaning [Cooper,DE]
 12590 Meaning is use in concept calculation [Harman]
 12593 Use theory makes words basic [Harman]
 4001 Meaning contains all possible uses [Nagel]
 3004 Meaning is used to express attitudes [Fodor]
 3204 Conceptual role semantics isn't very plausible [Rey]
 7764 Use might be successful, with no understanding [Lycan]
 7763 What is the rule for using a proper name? [Lycan]
 7765 Use involves commitment and entitlement [Brandom]
 9595 You might know a meaning but not the use [Williamson]
 14999 Only conventions make green things green? [Sider]

7. Meaning Holism

meaning is grounded in large chunks of language

a. Sentence meaning

1773 Sentences always mean, but words don't [Zeno of Citium]
 13467 Leibniz initiated the sentence as unit [Leibniz]
 8646 Ideas are not the meanings of words [Frege]
 7732 Words have meaning in a context [Frege]
 8446 Proposition sense is constructed from words [Frege]
 18705 Words function only in propositions [Wittgenstein]
 21700 Sentence holism facilitates paraphrasing [Quine]
 21701 Learn word meaning via sentences [Quine]
 8170 Sentences first, because they say something [Dummett]
 19131 Sentences are obvious; parts come later [Davidson]
 3588 Words for foundations, sentences for coherence [Williams,M]

b. Language holism

9180 Holism blurs the language/rules boundary [Frege]
 4142 If you know a sentence you know a language [Wittgenstein]
 1619 Quine gave us verification without sensation [Dennett]
 2334 Meaning holism attacks positivist foundations [Putnam]
 2336 Holism in language makes definition hopeless [Putnam]
 2335 Sentence meaning includes lots of implications [Putnam]
 6394 Sentence meaning comes from truth patterns [Davidson]
 2560 Are meaning and belief tied together? [Rorty]
 2761 If language is holistic how is it learned? [Dancy,J]
 3000 Meaning holism is a crazy doctrine [Fodor]
 2433 Holism means you can't think something twice [Fodor]
 2477 Background isn't needed to learn a concept [Fodor]
 7320 Holism cannot explain scientific method [Wright,C]
 3205 Semantic holism breaks down beliefs [Rey]
 9381 All the inferences will fix the meanings [Fodor/Lepore]
 4606 Sentences aren't understood in isolation [Heil]

c. Meaning by Role

18818 Possible actions indicate sentence meaning [Ramsey]
 12588 Meaning is role relating mind to reality [Harman]
 12589 Conceptual role semantics isn't just internal [Harman]
 12600 The content of thought is relational [Harman]
 16278 Functional role gives thoughts their content [Lewis]
 18033 Meaning is role in cognitive mental life [Block]
 3003 The same content has varied functional roles [Fodor]
 12634 Role in inference fixes meanings? [Fodor]
 9640 There is sense, reference, computational role [Brown,JR]
 9378 What properties produce a conceptual role? [Boghossian]
 9377 Conceptual role semantics seeks context [Boghossian]
 21641 Inferential role, or world-connected semantics [Hofweber]

8. Synonymy

whether two items can have identical meaning

7317 Terms can be substitutable by not synonymous [Quine]
 9009 Single words can be synonymous [Quine]

7319 Without synonymy we must give up meaning [Grice/Strawson]
3090 Meaning can be similar, not the same [Harman]
11967 Same sense, if possible, is equivalence [Kaplan]
2996 Same content doesn't give same reference [Fodor]
20300 External synonymy links to identical phenomena [Rey]
9372 Meaning implies possibly synonymy [Boghossian]

9. Ambiguity

what double meanings show about language

21929 Derrida distinctively describes ambiguity [Derrida]
21931 'Dissemination' rejects irreducible polysemia [Derrida]
3082 Ambiguity builds on logical forms [Harman]

10. Denial of Meanings

doubts about the whole idea of meaning

7279 Indefinable words are meaningless [Chuang Tzu]
4721 Uncertain facts create uncertain meanings [Wittgenstein]
4149 We don't have meanings as well as words [Wittgenstein]
4156 Trying saying "cold" and mean "warm" [Wittgenstein]
1617 Meaning is either significance or synonymy [Quine]
1609 Words do not 'have' a thing called meaning [Quine]
1621 Focus on analytic and synonymous, not meaning [Quine]
9471 Intentions must go [Quine]
8202 Meaning is essences applied to words [Quine]
21885 Words never quite co-exist [Derrida]
19064 Holism denies all theories of meaning [Dummett]
7305 Meaning is an empty concept [Kripke]
19270 Meaning disappears when you look for rules [Kripke]
8477 Lovers of meaning confuse it with reference [Orenstein]

B. Reference

1. Reference theories

way language-terms connect with things in reality

1757 Know this man, but not that he is Orestes [Eucleides]
21399 Referring and discussing are very different [Seneca]
7634 Icons, indexes and symbols all represent [Peirce]
4981 Word-reference part of sentence-reference [Frege]
4567 Our words rarely, if ever, refer [Russell]
4145 How do words refer to sensations? [Wittgenstein]
4712 There is no matter of fact about reference [Quine]
8470 Reference is inscrutable [Quine]
18898 In standard logic, only names can refer [Sommers]
6271 What is reference, not how to specify it [Putnam]
6388 Is reference where language and world meet? [Davidson]
6390 We can give up reference in language theory [Davidson]
2562 Science seems to need a theory of reference [Rorty]
4566 A theory of reference implies an ontology [Cooper,DE]
4571 Reference need not be a hit-or-miss affair [Cooper,DE]
10446 Inside and outside fictional reference [Bach]
10447 We refer to characters as abstract objects [Bach]
10443 Alluding to someone is not reference [Bach]
12642 Distinguish senses by their causal powers [Fodor]
12663 Singular terms and predicates refer [Fodor]
4995 Reference is not a single relation [Kirk,R]
9336 A reference is what makes beliefs true [Peacocke]
13885 Lack of reference may also mislead [Wright,C]
22244 Partial reference for confusion of objects [Field,H]
21615 Meaning without reference is possible [Williamson]
16356 Reference is either descriptive or direct [Recanati]
12791 Is reference our link to the world? [Laycock]

2. Denoting

the picking out of some specific thing

5810 Referring is not the same as denoting [Donnellan]
16385 'Denoting' is uniquely fitting a description [Russell]
5774 Denoting phrases give meaning to propositions [Russell]
5775 Denotation and meaning are different [Russell]
18918 Statements denote the world [Engelbreten]

3. Direct Reference

reference is fixed by direct links to objects

a. Direct reference

2340 Concepts and reference-fixing are separate [Putnam]
2341 Natural kinds are fixed by their extension [Putnam]
16394 Kripke gets his reference from metaphysics [Stalnaker]
17874 Define kinds, but names are direct? [Almog]
12032 Refer by names, indexicals or descriptions [Adams,RM]
18887 Variable assignment is direct reference [Salmon,N]
18885 Direct reference doesn't imply essentialism [Salmon,N]

13377 Constants for objects favours direct reference [Jubien]
16550 Can we refer to I-know-not-what? [Lowe]
16386 Direct reference in strong or weak versions [Recanati]
16393 Super-direct:the reference is the thing itself [Recanati]

b. Causal reference

4140 How long is the standard metre in Paris? [Wittgenstein]
17506 Not experts, but causal links, are what matter [Putnam]
10516 Realist reference for concreta, not abstracta [Dummett]
9181 Hearing a name isn't knowing its use [Dummett]
5822 Kripke picks on the wrong cause [Evans]
17033 We can change what a causal chain refers to [Kripke]
5823 A referent must cause a speaker's information [Evans]
5825 Reference is to sources of information [Evans]
14080 Are causal descriptions part of the theory? [Kaplan]
16404 A name has far too many causal links [Stalnaker]
16432 Descriptivism might incorporate a causal story [Stalnaker]
14071 Names also invoke pesistence criteria [Gibbard]
14215 Causal theories encourage reference error [Lewis]
10432 A baptism of nothing might launch a name [Sainsbury]
7615 Reference is a physical relationship [Field,H]
3209 Reference by dubbing requires prior meaning [Rey]
3210 If meaning is cause, everything is meaningful [Rey]
9547 Causal reference can't work for maths [Chihara]
15166 Causal reference leaves a nature unfixed [Sidelle]
18612 Americans tend to refer causally [Machery]
14475 Causal theories for nonexistence claims? [Thomasson]
14474 Causal reference needs to know a thing's sort [Thomasson]

c. Social reference

12524 Experts fix complex idea references [Locke]
10430 Reference is mainly a social phenomenon [Strawson,P]
9170 Society and reality help fix reference [Putnam]
14201 Maybe communities fix reference [Putnam]
14202 Communal minds don't fix reference [Putnam]
2338 Reference is social, based on experts [Putnam]
2339 No individual contains all of a language [Putnam]
4689 Reference is now external to the speaker [Kripke]
17504 Reference is collective [Kripke]
17035 Reference needs a source and a community [Kripke]
4956 A false description could fix a reference [Kripke]

4. Descriptive Reference

reference fixed through ways they are described

a. Sense and reference

15597 Semantics implies contradiction in reference [Frege]
17002 'Sense' is meaning and reference-fixing? [Frege]
18778 Names can have sense but no reference [Frege]
7805 Reference led Frege to realism [Frege]
4976 Words can have one reference, two senses [Frege]
4977 Sense is possible with no reference [Frege]
4979 Truth drives from sense to reference [Frege]
8449 Subjective sense destroys discussion [Frege]
16987 Russell seem to reject the idea of 'sense' [Russell]
3893 Maybe reference can determine sense [Putnam]
2519 For Frege sense determines reference [Katz]
2436 Sense can't fix reference, or vice versa [Fodor]
18886 Frege's 'sense' solves four puzzles [Salmon,N]
3149 Truth won't survive redescribed reference [Rey]
12231 Sense and truth give reference [Hale/Wright]
16372 Sense is supervenient on reference? [Recanati]
16388 Files give non-descriptive sense [Recanati]
16359 Sense is a mental file (not its contents) [Recanati]

b. Reference by description

15155 Ways of thinking of things, not the things [Frege]
5387 Many descriptions refer to one individual [Russell]
10448 Expressions refer, but relative to context [Bach]
6268 Scientific terms are not descriptions [Putnam]
6389 Reference must be defined linguistically [Davidson]
16988 These reasons support descriptive reference [Kripke]
17029 Aristotle's known properties aren't necessary [Kripke]
17032 Gödel is 'Gödel' without his theorems [Kripke]
10435 If the-F can misrefer, it is referring [Donnellan]
10451 Referential/attribution:semantic or pragmatic? [Bach]
5813 Even false descriptions can refer successfully [Donnellan]
9039 Description can't be sufficient for reference [Evans]
14209 Modified descriptivism still works [Lewis]
10439 Six candidates for referring expressions [Bach]

10441 Descriptions change as referents change [Bach]
10442 Unique descriptions aren't vital in thinking [Bach]
10445 If referents could shift, it isn't reference [Bach]
10457 Inherently referential used non-referentially? [Bach]
10463 Alluding or describing is not referring [Bach]
16348 We relate to objects through properties [Recanati]
16384 Descriptions can pick a file, or its content [Recanati]
16352 Rigid descriptions may still not refer [Recanati]
16353 Singularity needs relations, not descriptions [Recanati]
16355 Descriptive reference has three main problems [Recanati]
22245 Language refers via mental files [Recanati]

5. Speaker's Reference

reference fixed by what the speaker intends

4972 Same meaning doesn't imply same thought [Frege]
4570 Speakers refer, not expressions [Cooper,DE]
8355 It is people who refer, not expressions [Strawson,P]
8357 Failed reference is pseudo-use [Strawson,P]
5815 Intentions decide whether descriptions refer [Donnellan]
10459 Context is just something speakers exploit [Bach]
10460 'That duck' may not be the obvious duck [Bach]
10461 Anaphora reveals speakers's intentions [Bach]
10462 Information from speaker as well as utterance [Bach]
10434 Even quantifiers can be referential [Sainsbury]
15182 Overlapping entities so analytic individuation [Sidelle]
21650 Reference is in thought, not semantics [Pietroski]

C. Assigning Meanings

1. Syntax

purely structural or grammatical features of language

18007 Well-formed sentences can lack meaning [Chomsky]
18006 'Interpretative semantics' puts syntax first [Chomsky]
3507 'Universal grammar' explains nothing [Searle]
2581 Theoretical linguistics overrules intuitions [Block]
8073 Different syntax can have superficial identity [Devlin]
21638 Syntax also concerns sentence focus [Hofweber]
15347 By coding, we describe syntax in arithmetic [Horsten]
18008 Syntax is partly fixed by semantics [Magidor]
18010 Similar sentences may differ in structure [Magidor]

2. Semantics

general ideas about assigning meaning to symbols

15788 'Semantics' is a pseudoscience [Quine]
16403 A semantic system, or semantic facts? [Stalnaker]
16461 We have no semantics for natural quantifiers [Stalnaker]
2434 Broad semantics relies on truth and denotation [Fodor]
12616 English has no semantic theory [Fodor]
12645 Semantics implies world from speech [Fodor]
12646 Semantics must involve the world [Fodor]
7872 The meaning of concepts is their purpose [Papineau]
13965 Semantics: theory of meaning, or consequence? [Soames]
15587 Sameness of meaning is partly relational [Fine,K]
15589 Inferential holism v Atomistic Representation [Fine,K]
15596 Assign each expression a semantic value? [Fine,K]
15598 Semantic facts, not theories, come first! [Fine,K]
15600 Referentialism: names, predicates ,connectives [Fine,K]
15601 Approach reality through sense, or reference? [Fine,K]
14618 Semantics: assign values, or define truth [Fine,K]
14621 Semantics: requirements,truth or values? [Fine,K]
18038 'I' and 'I' may not mean True and False [Williamson]
19533 Inferentialism is internalist, not referential [Williamson]
19535 Inferential meaning and reference? [Williamson]
19534 Which inferential patterns are essential? [Williamson]
18791 Situations are basic, the rest abstracted [Mares]
19538 Formally, entailment is set inclusion [Dougherty/Rysiew]
18053 Semantics is potential context change? [Magidor]
17732 Success in action explains representations? [Jenkins]
14720 There is semantic and metasemantic theory [Schroeter]

3. Predicates

terms attributing characteristics to things

5107 There are seven types of predicate [Aristotle]
12349 Predicates are said of many things [Aristotle]
11837 Predicates pick out substance or quality [Aristotle]
20786 Predicates are incomplete 'lekta' [Stoic school]
15383 External can't be predicated of things [Abelard]
11206 We construct attributions, based on reality [Aquinas]
9022 Russell confuses predicates and attributes [Quine]

19159 Predicates are just 'true of' objects [Quine]
16932 Projectible predicates can be universalised [Quine]
9281 Predicates need a range of application [Strawson,P]
4035 Why does a given predicate apply to an object? [Armstrong]
8533 We ensure that our predicates apply [Armstrong]
5457 Predicates don't just assert properties [Ellis]
19156 Modern predicates are sentences minus terms [Davidson]
19176 Truth will explain predication [Davidson]
4572 Sentences can't just name subject & predicate [Cooper,DE]
6995 Successful predication fits nature [Jackson]
13363 Predicates are sentences with gaps [Bostock]
17857 Predicates needn't refer to anything [Wright,C]
18536 The subject-predicate form reflects reality [Heil]
10401 Logic predicates vastly simplify language [Swoyer]
8471 Nominalist, platonist or Montague predicates [Orenstein]
21658 Expressing a property can be verbose [Hofweber]
21659 'Taller than this' expresses many properties [Hofweber]
10634 'Distributive' predicates; individuals = group [Linnebo]

4. Compositionality

sentence meaning as built up from its components

7772 Compositionality proves truth conditions view [Davidson]
19133 If you fix the parts, do they make a whole? [Davidson]
12610 Meaning must be compositional [Peacocke]
18994 Assertive content is not compositional [Yablo]
11005 Composition with non-existents? [Read]
21655 Compositionality builds truth-conditions [Hofweber]
18000 Weak composition: all meaning is from parts [Magidor]
17999 Strong composition: all wffs are meaningful [Magidor]
18014 Grasp endless sentences, so compositionality [Magidor]
14695 Semantics builds up true sentences [Schroeter]

5. Fregean Semantics

giving meaning in the manner laid out by Gottlob Frege

7309 Sense is strict meaning, without tone [Frege]
7312 'Sense' was to solve three problems [Frege]
11126 'Sense' explains two key phenomena [Frege]
8164 The first theory of meaning was Frege's [Frege]
9817 Frege moved from content to understanding [Frege]
8171 Meaning is sense and force and tone [Frege]
4954 'Sense' isn't both meaning & reference fixing [Kripke]
7304 Meaning has five components [Frege]
16349 Sense/reference blocks direct acquaintance? [Russell]
7313 Frege's notion of sense is superfluous [Russell]
9836 Fregean semantics assumes clear objects [Dummett]
7327 How do words create sentence-meaning? [Davidson]
7331 Translate sentences into Fregean logic [Davidson]
2520 Sense gives meaning, not reference & truth [Katz]
6077 Semantics needs instantiation, not sets [McGinn]
16382 Fregean presentations are mental files [Recanati]
18413 Fregeans disagree about 'senses' [Cappelen/Dever]

6. Truth-Conditions Semantics

giving meaning by specifying how sentences would be true

7767 Explain descriptions by truth conditions [Russell]
8189 Use presupposes truth-conditions [Dummett]
8191 Truth-conditions needs agreement about truth [Dummett]
19132 Top-down semantics begins with truth [Davidson]
2559 Meaning is inference relations of sentences [Rorty]
11076 Meaning is assertibility-conditions [Kripke]
3079 Truth conditions must explain structure [Harman]
6989 Is "he has a beard" true? [Jackson]
16401 Understanding must involve truth-conditions [Stalnaker]
2459 Meaning must be relevant to the real world [Fodor]
13964 Content is propositional, not circumstances [Soames]
2547 Information is symbol strings with truth value [McGinn]
7770 Renate/cordate a truth conditions problem [Lycan]
18997 Truth-conditions can't give subject-matter [Yablo]
7323 Deflationary truth just needs syntax [Miller,A]

7. Extensional Semantics

giving meaning by specifying which objects the meaning includes

6074 Is extension part of a predicate's meaning? [McGinn]
14224 The equilateral-equiangular link needs proof [Shalkowski]
9460 Extensionalists can't discuss nonexistence [Jacquette]
9459 Extensional semantics is circular [Jacquette]
14622 Referential semantics includes real objects [Fine,K]
19532 Referential semantics is externalist [Williamson]
14697 One extension doesn't mean one meaning [Schroeter]

14696 The simplest semantics assigns extensions [Schroeter]

8. Possible Worlds Semantics

giving full meaning by specifying some set of possible worlds

11968 Meaning is truth at possible worlds [Carnap]
16469 Plantinga has a semantics using essences [Plantinga]
16470 Plantinga needs essences of essences [Stalnaker]
16410 Modal semantics has functions, not extensions [Stalnaker]
16448 Possible world semantics can explain modality [Stalnaker]
7868 Content is possible worlds that make truth [Papineau]
7869 Truth conditions won't handle impossibilities [Papineau]
7773 Possible worlds best for truth conditions [Lycan]
7774 Possible worlds explain sentence entailment [Lycan]
9207 All necessary truths match the same worlds [Fine,K]
17701 World semantics is compositional [Mares]
13248 Rest truth-conditions on 'situations' [Beall/Restall]
14698 Intensions assign extensions at each world [Schroeter]
14699 Proper names and 'I' differ in meaning! [Schroeter]
14709 Are meanings and modal claims connected? [Schroeter]
14719 All necessary truths map to the True! [Schroeter]
18417 Possible worlds are too coarse-grained? [Cappelen/Dever]

9. Indexical Semantics

giving meanings for terms that obviously depend on context

19233 Indexicals invite hearers to look around [Peirce]
21550 Indexicals can't be eliminated [Russell]
7769 'I am sick now' needs a speaker and time [Davidson]
12151 We can't just replace 'I' [Perry]
18412 Indexicals individuate certain belief states [Perry]
15605 Indexical are linked to demonstrations [Fine,K]
6899 Indexicals depend on utterance circumstances [Mautner]
16389 'I am tired': same and different meanings [Recanati]
16363 Indexicals have their reference relationally [Recanati]
16364 Only a token of an indexical can refer [Recanati]
18408 Indexicals are inconstant, not special [Cappelen/Dever]
18414 Different referents for 'I', so sense differs [Cappelen/Dever]
18423 All indexicals can be said non-indexically [Cappelen/Dever]

10. Two-Dimensional Semantics

giving meaning by possible worlds with two separate components

14893 Why some necessities seem contingent? [Kripke]
14894 Indexicals have 'character' and 'content' [Kaplan]
14700 Content for profile, character for context [Kaplan]
16430 Primary contingent and secondary necessary [Stalnaker]
16431 Is the secondary intension metasemantic? [Stalnaker]
13972 2-D-ism relinks necessity to analyticity [Soames]
14708 Rationalist 2D explores necessary relations [Chalmers]
13958 'Primary intension' is based on actual-world [Chalmers]
13959 'Secondary intensions' rigidify the 'primary' [Chalmers]
2399 Reference is in actual or possible worlds [Chalmers]
13957 Meaning is a priori and a posteriori [Chalmers]
13961 Primary and secondary truth-conditions [Chalmers]
14739 'Water' is 2D inconstant across worlds [Chalmers]
16351 2-D fixes reference, the truth of predication [Recanati]
16350 2-D handles singularity in descriptivism [Recanati]
14701 Build arrays of worlds against contexts [Schroeter]
14702 'Actually' needs a double-indexed system [Schroeter]
14705 Apriori and aposteriori reference components? [Schroeter]
14715 2D for meaning, analysis and reference [Schroeter]
14716 2D semantics loses unary propositions? [Schroeter]

D. Propositions

1. Propositions

ideas that exist independently from any language

20787 Propositions can be asserted or denied [Chrysippus]
14110 Propositions contain things, not words [Russell]
21543 Negative propositions can be true [Russell]
6091 There are more propositions than facts [Russell]
5781 Important belief is verbalisable propositions [Russell]
5782 There are word- and image-propositions [Russell]
5776 Propositions are what we believe [Russell]
14451 Propositions: true or false words or thoughts [Russell]
18711 Propositions are negatable expressions [Wittgenstein]
13976 A 'proposition' is whatever is thought [Ryle]
5162 Not all good sentences express propositions [Ayer]
8169 We can't distinguish proposition from content [Dummett]
19158 Equivalent sentence, different proposition! [Davidson]
14663 Propositions or states of affairs, or both? [Plantinga]

3085 What fixes the order of conjoined nouns? [Harman]
13944 We distinguish assertions from utterances [Cartwright,R]
13947 Assertion varies while sentence-meaning won't [Cartwright,R]
16442 Propositions are truth conditions [Stalnaker]
16447 Propositions need consistency and truth [Stalnaker]
6340 There are 'de re' and 'de dicto' propositions [Horwich]
7702 Propositions are Platonic or nominal [Jacquette]
13962 A statement supports two propositions [Chalmers]
10966 A proposition objectifies what a sentence says [Read]
9452 Propositions are functions, or ordered sets [Bealer]
9453 Rigidity won't ensure same proposition [Bealer]
19200 Propositions: possible worlds? structures? [Merricks]
19206 Same representation means same proposition [Merricks]
21656 Proposition have no content [Hofweber]
13233 Propositions are content, without form [Beall/Restall]
18920 'That Socrates is wise' denotes a proposition [Engelbreiten]

2. Abstract Propositions

propositions as real non-physical entities

a. Propositions as sense

17264 Propositions are concepts for assertion [Bolzano]
12232 Propositions are the senses of sentences [Bolzano]
4974 Same thought in many languages [Frege]
16873 Thoughts are objective, not psychological [Frege]
16872 A thought is the sense of a sentence [Frege]
19467 Thoughts are senses of sentences [Frege]
18967 Propositions are timeless cognitive meanings [Quine]
18368 There are propositions for all of being [Armstrong]
18370 Abstract propositions explain nothing [Armstrong]
2518 Sentences are abstract types, not tokens [Katz]
8076 Propositions are crucial to logic [Devlin]
4604 Can we interact with abstract propositions? [Heil]
10420 A proposition is a saturated property [Swoyer]
9451 Propositions are now widely accepted [Bealer]
19202 Propositions: necessary and representational [Merricks]
19204 True propositions may never be thought [Merricks]
19210 Propositions can't change truth-value? [Merricks]
21635 Beliefs and desires need propositions [Hofweber]
18862 Propositions are all possible thoughts? [Tallant]

b. Propositions as possible worlds

4897 A proposition is a set of possible worlds [Perry]
8420 A proposition is a world-set where it is true [Lewis]
15736 Propositions are properties of worlds [Lewis]
9654 A proposition is a set of possible worlds [Lewis]
15738 Propositions as worlds lack structure [Lewis]
7002 How can propositions have truth values? [Heil]
21624 Propositions as worlds lose something [Williamson]
18001 Partial propositions: no truth in some worlds? [Magidor]

3. Concrete Propositions

propositions as made of real objects

19164 Propositions as facts blurs their truth [Davidson]
21726 Propositions contain real entities [Russell]
21702 Russell renamed his propositions 'facts' [Russell]
9085 Concrete propositions could not be necessary [Plantinga]
14616 Russellian propositions contain real things [Stalnaker]
16446 No proposition if no thing it refers to [Stalnaker]
19216 Propositions need their items to exist [Williamson]
17702 Structured or unstructured propositions [Mares]
19201 Propositions don't contain what they are about [Merricks]
19211 A proposition is its truthmaker? [Merricks]
21662 Are there thoughts we can't think? [Hofweber]
16380 Russellian propositions are nicely constant [Recanati]

4. Mental Propositions

propositions as features of thought

13763 Words vary but thoughts are the same [Aristotle]
6024 Stick to what speakers think they are saying [Diod.Cronus]
9105 Some concepts exist in no language [William of Ockham]
6718 Wordless thought is best [Berkeley]
6435 Beliefs do not require words [Russell]
13981 Many people can share one delusion [Ryle]
13987 Think in French - but believe in French? [Ryle]
9084 The proposition 'no humans' might be true [Plantinga]
13943 Whatever was said can be held 'true' [Cartwright,R]
13946 Assertions aren't tied to any actual words [Cartwright,R]
15154 Mind explains propositions, not vice versa [Soames]
6632 We believe-that and utter-that a proposition [Lowe]

8484 If a and b believe p that implies propositions [Orenstein]
9133 We need propositions to resolve ambiguity [Sorensen]
22250 Utterances don't have attached thoughts [Recanati]
16298 Shared beliefs need propositions [Halbach]

5. Unity of Propositions

what makes a proposition a unified entity

16874 Parts of thoughts map onto sentences [Frege]
19472 Thoughts are complete sentences at a time [Frege]
14111 A proposition is essentially a unity [Russell]
19157 Objectivity needs self-unifying propositions [Russell]
7526 Propositions aren't unities; they're analysable [Moore, GE]
15058 Essential proposition-ingredients fix truth [Fine, K]
19212 Why are propositions united, or unique? [Merricks]
19213 What unites constituents - as a proposition? [Merricks]

6. Propositions Critique

rejection of the existence of propositions

7534 Only judgements exist, not propositions [Russell]
21724 A multiple relations theory dumps propositions [Russell]
6094 We don't need the idea of propositions [Russell]
6096 Propositions for untruths can't exist [Russell]
21712 I now reject shadowy propositions [Russell]
13989 No propositions, just factual sentences [Ryle]
13982 With true propositions come false/absurd ones [Ryle]
2610 Propositions are just equivalent sentences [Ayer]
18968 When do two sentences express one proposition? [Quine]
9007 Can two sentences express one proposition? [Quine]
9008 We can't separate out a sentence's information [Quine]
9010 Skip propositions; just sentences/equivalence [Quine]
3968 Propositions need a link to sentences [Davidson]
12150 Indexicals misfit in propositions [Perry]
6631 Can abstract propositions have causal powers? [Lowe]

E. Analyticity

1. Analytic Propositions

propositions that just seem to be about words

8734 Kant's 'analytic' is too narrow [Shapiro]
7314 Kant's idea of analytic has problems [Miller, A]
16926 Analytic judgement spell out concepts [Kant]
16927 Analytic: deny the predicate is contradiction [Kant]
20291 Analytic is predicate contained in subject [Kant]
20292 Analytic is breaking subjects into predicates [Kant]
9370 Analytic is logical truth by substitution [Frege]
8743 Analyticity to be an epistemic concept [Frege]
7725 'P or not-p' lacks subject or predicate [Frege]
13345 Analytical is modelled by all objects [Tarski]
9371 Analytic depends on logic, or synonymy [Quine]
20294 Being analytic doesn't need containment [Rey]
20293 Analytic judgements presume non-contradiction [Rey]
20297 Analytic truths are undeniable not unrevisable [Rey]
20301 Meaning properties explain usage [Rey]
20302 Our language faculty may fix meanings [Rey]
20303 Intuitions supporting analyticity are weak [Rey]
14099 Analytic sentences have a reductive direction [Rosen]
14488 Redundant words will reveal analyticity [Thomasson]
17725 Analyticity comes in five types [Jenkins]

2. Analytic Truths

propositions that are true simply because of their words

11240 Analytic truth is absent in Aristotle [Aristotle]
12233 Conceptual truth supports conceptual truth [Bolzano]
20295 Make analytic truths logical by substitution [Frege]
7316 Logic & definitions enough for analytic truths [Frege]
4576 Analytic truth can be reduced to logical truth [Cooper, DE]
10627 Many conceptual truths are not analytic [Hale/Wright]
13960 2-D semantics has two truths by meaning [Chalmers]
11170 Particular terms produce the analyticity [Fine, K]
11172 The meaning of 'bachelor' stands alone [Fine, K]
7315 False predicates are not contradictions [Miller, A]
17721 Meaning analyticity bad; understanding good [Boghossian]
14998 Convention cannot explain analyticity [Sider]

3. Analytic and Synthetic

distinction between real assertion and the purely verbal

19487 Carnap relies on analytic/synthetic [Quine]
3087 The analytic/synthetic distinction is useless [Harman]
4890 Some concepts are central to thinking [Perry]
2473 Analysis requires analytic/synthetic division [Fodor]

9368 Epistemological and metaphysical analyticity [Boghossian]
4717 If no analytic, then no meaning? [O'Grady]
22152 Aristotelians accept analytic-synthetic [Boulter]

4. Analytic/Synthetic Critique

rejection of sharp distinction between real and verbal assertion

20959 Only analytic once the predicate is absorbed [Schleiermacher]
21763 Explicating one category creates another [Hegel]
2515 Quine attacks Frege's empty analytic concept [Katz]
9366 Quine was attacking necessity and a priori [Quine]
14473 Analyticity as substitution won't work [Quine]
7321 Sects 1-4 of 'Two Dogmas' fail [Miller, A]
8803 Quine got rid of unwanted meanings [Davidson]
17737 Large units of meaning bar analyticity [Quine]
1622 What fixes the definition of analytic truths? [Quine]
1624 Definitions of analyticity seem circular [Quine]
21338 I doubt the division of fact from meaning [Quine]
8900 Analyticity is just community acceptance [Quine]
8201 Meaning/extras, essence/accident - vague! [Quine]
19050 Holism blurs the analytic/synthetic idea [Quine]
20299 All analytic is sub-consciously empirical? [Rey]
14619 Can we separate semantics from facts? [Fine, K]
15016 Analyticity's role needed truth by convention [Sider]

F. Communication

1. Rhetoric

use of language for emotional influence

6331 Truth isn't beautiful; beauty isn't truthful [Lao Tzu]
7357 Successful rhetoric often produces hatred [Confucius]
5864 End seriousness or laughter with its opposite [Gorgias]
9866 Rhetoric achieves slavery without force [Gorgias]
114 Rhetoric aims at conviction not morality [Plato]
116 Rhetoric is irrational about means and ends [Plato]
3324 Was the theory of Forms an error of rhetoric? [Benardete, JA]
5945 The 'Republic' is about the theory of rhetoric [Lawson-Tancred]
158 Good rhetoric requires truth [Plato]
159 Only philosophers can be truly good speakers [Plato]
5946 'Phaedrus' pioneers philosophical rhetoric [Lawson-Tancred]
283 Rhetoric must be ruled by wisdom [Plato]
5849 Rhetoric is a political, dialectical and moral [Aristotle]
20777 Eleven divisions of stoic rhetoric [Stoic school]
21667 Oratory adds ornament to philosophy [Cicero]
20814 Eloquence is the peak of civilisation! [Cicero]
6681 We want knowledge so we can talk about it [Pascal]
20266 Wisdom must be expressed, even foolishly [Nietzsche]
1596 Reason aims at beautiful speech, not knowledge [Roochnik]
1578 Relativism means rhetoric replaces reason [Roochnik]
10358 Often only socialising persuades [Kusch]
20946 Philosophy can't strip rhetoric from language [Bowie]

2. Assertion

stating something while claiming it is true

13951 Assertions, not meanings, are true, probable.. [Cartwright, R]
18121 In logic assertion can't affect meaning [Bostock]
18052 Assertions add to a context's content [Stalnaker]
18762 Entitled assertion seems to imply truth [McGee]

3. Denial

stating something while rejecting its truth

1554 Contradicters do not discuss the same thing [Prodicus]
1705 Opposed views needn't be true and false [Aristotle]
12368 Negation takes something away [Aristotle]
16491 'Not' isn't in facts; it is disbelief [Russell]
12594 If p=¬q and q=¬p, which one is negative? [Harman]
12338 We must either assert or deny 'Fa' [Badiou]
19005 'Not' reverses assertions, not erases them [Yablo]
18906 Denying P, or asserting not-P? [Engelbreitsen]
11214 We learn 'not' along with affirmation [Rumfitt]
18829 Not-A has incompatible truth grounds with A [Rumfitt]

4. Private Language

possibility of a solitary person having language

15991 For private ideas, any words will do [Locke]
19585 Every person has his own language [Novalis]
8478 There can't be a private language [Dewey]
6093 A logically perfect language has private names [Russell]
4136 A language is a form of life [Wittgenstein]
6166 Is the problem the community, or occasions? [Rowlands]
7875 Private sensation names are incommunicable [Wittgenstein]

4146 Our mental images cannot be doublechecked [Wittgenstein]
4147 Knowing what pain is can't be a private affair [Wittgenstein]
5659 If sense is public, so is reference [Wittgenstein]
4152 Public language gets me from sight to word [Wittgenstein]
5817 Language is cooperative, not individual [Putnam]
6279 Private language doesn't need meaning [Putnam]
8870 Thought and knowledge need other minds [Davidson]
3970 Thought depends on communication [Davidson]
11075 There is a paradox of rule-following [Kripke]
8254 The Private Lang. Arg. attacks the Given [McDowell]
2484 Mentalese kills the Private Language Argument [Fodor]
3516 The PL argument is about false introspection [Papineau]
3882 Foundations can't be totally private [Scruton]

5. Pragmatics

aspects of meaning fixed by practical language situations

a. Contextual meaning

9021 Explain expressions by truth-contexts [Quine]
15229 'No alternative' has many contexts and grounds [Harré/Madden]
10458 Contextual variation isn't determination [Bach]
21645 'Semantic type coercion' selects one reading [Hofweber]
22249 Hearers' thoughts differ from speakers' [Recanati]
13448 Domain from semantic or pragmatic context [Rayo/Uzquiano]
18036 Sentences can have meaning without truth-value [Magidor]
18051 Presupposition is contextual? [Magidor]
18406 Basic view: content, plus character [Cappelen/Dever]
18411 Context-sensitivity is very widespread [Cappelen/Dever]

b. Implicature

18046 Maxim of Quantity: be informative [Grice]
18045 Maxim of Quality: don't assert the false [Grice]
18044 Maxim of Manner: be brief [Grice]
10991 Converse with 'quality' and 'quantity' [Grice]
9043 'Deferential' usage conforms to others [Evans]
14718 Assertion tries to narrow the possibilities [Stalnaker]
3169 Logical language needs deep explanation [Rey]
21639 Background can be omitted from answers [Hofweber]
18043 Trivial truth is dull, or context fixity [Magidor]
18042 Trivial falsity is deception, or empty context [Magidor]

c. Presupposition

18047 Presupposition makes it sound right? [Magidor]
18048 Test presupposition by surprised response? [Magidor]
18049 Test presupposition by its projections? [Magidor]
18050 Presuppositions are implied by s and not-s [Magidor]
18054 What triggers presuppositions? [Magidor]

6. Interpreting Language

making sense of another person's speech

a. Translation

18285 All translation loses some content [Carnap]
19045 Translation is a flimsy notion [Quine]
12591 Language-mastery requires thinking [Harman]
4706 Deviant beliefs, or mistranslation [O'Grady]
17991 Is everything translatable, or nothing? [Hofweber]

b. Indeterminate translation

6318 Wittgenstein implied indeterminate translation [Wittgenstein]
3988 If translation is vague, so is interpretation [Dennett]
6311 Sentence-stimulus links restrict translation [Quine]
6312 Final translation of 'gavagai' is impossible [Quine]
6313 'Gavagai' and 'rabbit' may not be coextensive [Quine]
6317 Speech behaviour won't fix translation [Quine]
1631 A language could be simulated with no ontology [Quine]
1632 Translation of our own past language is unsure [Quine]
18963 We translate individuaturs along with 'rabbit' [Quine]
6270 Correct translations explain behaviour [Putnam]
6283 Mapping the world is also indeterminate [Putnam]
14206 Infinite interpretations are all correct [Putnam]
6179 Which comes first, translation or truth? [Blackburn]
6399 Translation reveals conceptual schemes [Davidson]
3495 We share enough background for translation [Searle]
3083 Some areas of languages don't overlap at all [Harman]
3698 If translation fails, so do meaning and belief [Bonjour]
2763 Indeterminacy is a balance of belief & meaning [Dancy, J]
6341 Good translation is mapping usage pattern [Horwich]

c. Principle of charity

4144 Shared humanity makes translation possible [Wittgenstein]
11049 Communication needs consensus [Wittgenstein]
6314 Imposing our logic improves translations [Quine]

6315 Weird beliefs imply bad translation [Quine]
7330 Charity is only needed for logical constants [Quine]
6316 Translate to generate maximum truth [Wilson,NL]
6275 Charity is inappropriate in some areas [Putnam]
18703 I think, therefore I am generally right [Davidson]
8869 Charity involves logic and true beliefs [Davidson]
3971 Interpretation has to involve charity [Davidson]
19154 Charity presumes the logical constants [Davidson]
3402 Assume people don't utter nonsense [Kim]
3403 Assume people correctly infer further beliefs [Kim]
9040 Charity should minimize inexplicable error [Evans]
8614 Charity occasionally imputes error [Lewis]
8615 Charity requires natural properties [Lewis]
15539 Interpret messages so they make sense [Lewis]
2762 We must assume truth and sense in translation [Dancy,J]
7329 Treat speakers as intelligible, not right [Miller,A]
7328 Hold most of someone's beliefs true [Miller,A]
4734 We identify languages before translation [O'Grady]

d. Metaphor

1692 Don't use metaphors in definition or argument [Aristotle]
7775 There are no rules for reading a metaphor [Davidson]
7776 Metaphors have only their literal meaning [Davidson]
7777 Seeing falsehood leads to metaphor [Davidson]
19161 Obvious falseness indicates metaphors [Davidson]
8861 Most words can be metaphors [Yablo]
18022 Metaphors tend to involve category mistakes [Magidor]
18023 Must metaphors have literal meanings? [Magidor]
18025 Metaphors lack magic if they are similes [Magidor]
18024 Metaphors mean the same as their similes? [Magidor]
18026 Metaphors as substitutes for the literal? [Magidor]
18027 One predicate can differ by context [Magidor]
18028 Metaphor as implicature based on the literal? [Magidor]
18029 There are no 'metaphorical meanings'? [Magidor]

20. Action

A. Definition of Action

1. Action Theory

general ideas about the nature of action

7999 There are five sources of all action [Anon (Bhag)]
4411 Man and deed are inseparable [Nietzsche]
20062 Odd causal chains undermine causal theory [Chisholm]
20057 We must study the psychology of behaviour [Mele]
9759 Theory and practice of action are different [Korsgaard]
6659 Volition, belief/desire, or agent [Lowe]
20035 Action theory: study agents and deliberateness [Stout,R]
20084 Justifiable causal processes are agency [Stout,R]
20014 Involuntary, purposed, intentional, autonomous [Wilson/Schpall]

2. Duration of an Action

fixing the start, duration and end of an action

20030 If A causes B, they must be distinct events [Hume]
20020 Actions unite if they are linked [Davidson]
12843 Actions are activities or performances [Simons]
20061 But are mental states and actions separate? [Stout,R]
20079 Are acts movements, or longer? [Stout,R]
20080 Action 1 causes 2, or is part of it? [Stout,R]

3. Actions and Events

relationship between actions and mere events

6658 Is raising my arm more than the arm rising? [Wittgenstein]
20059 Actions are clearly not events [Stout,R]

4. Action as Movement

treating actions as (mainly) bodily movements

4169 All acts of will are bodily movements [Schopenhauer]
6167 Action is movement caused by intentions [Rowlands]
20081 Bike riding isn't just movement [Stout,R]
20019 Movement is only part of an agent action? [Wilson/Schpall]
20021 Are acts a movement, process or attempt? [Wilson/Schpall]

5. Action as Trying

action is the trying to do it, not the movement

20082 Action is trying to move, not moving [Hornsby]

B. Preliminaries of Action

1. Intention to Act

mental state that usually initiates an action

a. Nature of intentions

4380 Akratic actions don't aim at a good [Burnyeat]
20041 Acts are intentional if reasons explain them [Anscombe]
20072 Explain intentions by intentional actions [Davidson]
20076 Intention is a judgement of desirability [Davidson]
20034 Intentions imply three basic norms [Bratman]
20033 Intentions have normative aspects [Bratman]
20169 Intention varies with the description [Kekes]
20039 Intentional acts are caused by intentions? [Stout,R]
20044 Acts are intentional when justifiable [Stout,R]
20047 Actions respond to reality, not to thought [Stout,R]
20065 Do intentions have an intrinsic nature? [Stout,R]
20067 Desires, unlike intentions, can be incompatible [Stout,R]
20078 Intentions may be internal promises [Stout,R]
20023 Success on a false belief shows a gap [Wilson/Schpall]
20022 Intentional acts must be in the right way [Wilson/Schpall]
20025 Good intentions can be incompatible [Wilson/Schpall]

b. Types of intention

135 All activity aims at the good [Plato]
20074 There are prior and ongoing intentions [Davidson]
20026 Intentions are immediate, or long-term [Bratman]
20036 Intentional agency is internal and external [Stout,R]
20066 Speech needs sustained intentions, not prior [Stout,R]

c. Reducing intentions

20796 Action needs affinity and impulse [Plutarch]
20024 Intentions are primitive and irreducible [Davidson]
20032 Intentions aren't belief-desire, but distinct [Bratman]
20031 An intention is a belief-desire combination? [Wilson/Schpall]

d. Group intentions

20073 Shared intentions reduce to individual ones? [Stout,R]
20069 Requests to pass salt are shared intentions [Stout,R]
20070 Individuals can't express group intentions [Stout,R]
20071 Intentions are goals that guide behaviour [Stout,R]
20027 Shared intentions need 'joint commitments' [Wilson/Schpall]
20028 Maybe a group can be a rational agent [Wilson/Schpall]

2. Willed Action

action arising from the mind's decision-making faculty

a. Will to Act

2171 There is no act between concluding and doing [Homer]
8230 When impelled to act - stop [Anon (Cent)]
22118 Augustine created the concept of the will [Augustine]
1846 The will can only choose what it thinks good [Aquinas]
1847 Will is compelled by end, not by means [Aquinas]
1857 To avoid good deeds, don't think about them [Aquinas]
4309 Will and intellect are the same [Spinoza]
4838 The 'will' is an empty concept [Spinoza]
12946 The will includes the understanding [Leibniz]
19331 Will is inclination to pursue what is good [Leibniz]
2220 We learn the influence of will from experience [Hume]
6183 Can pure reason determine the will? [Kant]
6191 Will gives purposes to desires by principles [Kant]
7187 Schopenhauer should have deified the will [Nietzsche]
21365 Only the will is thing-in-itself [Schopenhauer]
21924 Knowledge evades the misery of willing [Schopenhauer]
3772 The will is the product of desire [Mill]
18299 The past always frustrates the will [Nietzsche]
4554 The 'will' is a false simplification [Nietzsche]
18313 Will is just a word, not a faculty [Nietzsche]
9265 Will is effective desire producing action [Frankfurt]
7861 Consciousness affects brain processes [Libet]
6660 Unconscious processes initiate movement [Libet]
6661 Libet gives empirical support for the will [Lowe]
b. Volitionism
20304 The cause of my action is in my will [Shakespeare]
20037 Mere willing produces walking [Descartes]
4552 There is no such thing as pure 'willing' [Nietzsche]
20038 If walking is just willing, why have legs? [Stout,R]

c. Agent causation

5211 Voluntary acts originate in the agent [Aristotle]
5221 Deliberation ends in the core of the self [Aristotle]
20051 Agency is a unique type of causation [Reid]

20054 Some brain events must be agent-caused [Chisholm]
5488 Regularities cannot explain human agency [Ellis]
20015 Free action needs identification with reasons [Frankfurt]
20052 Action has to involve an agent [Stout,R]
20050 Not agents, but their events or states? [Stout,R]

d. Weakness of will

195 No one willingly does evil or base actions [Socrates]
199 Most people think weakness of will is possible [Socrates]
1653 Separate parts of mind make akrasia possible [Vlastos]
5843 All actions follow from 'ought' [Socrates]
5253 We can observe akrasia taking place [Aristotle]
4383 Why is the better syllogism overcome? [Burnyeat]
68 Akrasia and enkrateia separate will and desire [Aristotle]
4318 Virtue is right reason, feeling and action [Aristotle]
4372 Akrasia is bad reason, not opposed to it [Achtenberg]
5254 Maybe akrasia involves opinion, not knowledge [Aristotle]
5255 People may act against part of their knowledge [Aristotle]
5257 Regret is possible after akrasia [Aristotle]
20850 Passions are judgements; greed values money [Chrysippus]
19365 Levels of weakness are levels of perception [Leibniz]
22098 Socrates neglects the knowing/acting gap [Kierkegaard]
7209 Weakness of will is splitting of impulses [Nietzsche]
6385 We may misjudge which is the strongest reason [Davidson]
4317 Akrasia is judged after the event [Williams,B]
4355 Ill will and a good act is inverse akrasia [Hursthouse]
20077 Akrasia supports internalist agency [Stout,R]

C. Motives for Action

1. Acting on Desires

desires and emotions as the main motivator of action

1540 Pleasure and pain guide all our choices [Democritus]
7408 Passions can guide without reason [Hobbes]
2362 Will is just final thought before an action [Hobbes]
20305 In actions, desire is our essence [Spinoza]
5489 Humans have power over their dispositions [Ellis]
3814 Deliberation can influence our preferences [Searle]
20202 Motives involve aims as well as desires [Zagzebski]
20049 Maybe motivation comes first, not emotion [Stout,R]
20046 Ascetics reject what they most desire [Stout,R]

2. Acting on Beliefs

action as primarily a response to some beliefs

a. Acting on beliefs

16 Virtue is instinct or knowledge [Plato]
20045 Reasons are pro attitudes with beliefs [Davidson]
20149 Controlled actions arise from our attitudes [Kekes]
4325 Can belief without desire cause actions? [Hursthouse]

b. Action cognitivism

20016 Strong Cognitivism: intentions are beliefs [Wilson/Schpall]
20017 Weak Cognitivism: intention is partly belief [Wilson/Schpall]
20018 Are intentions a unique mode of knowledge? [Wilson/Schpall]
18420 Action doesn't need a special class of beliefs [Cappelen/Dever]

3. Acting on Reason

action as primarily a response to reason

a. Practical reason

5839 Wisdom and prudence are the same [Socrates]
4371 Seeing the whole is seeing the value [Achtenberg]
69 Deliberation is about means to an end [Aristotle]
73 Practical reason aims at right appetite [Aristotle]
5247 Prudence is concerned with particulars [Aristotle]
80 Virtue judges ends, and prudence means [Aristotle]
5249 Prudence necessitates goodness [Aristotle]
82 Prudence makes all the virtues possible [Aristotle]
20212 Phronesis seeks truths for human good [Aristotle]
1836 Prudence, not philosophy, avoids mental pain [Epicurus]
2363 Reason is general, deliberation of particulars [Hobbes]
19343 We always seek economy in our decisions [Leibniz]
6692 Evade practical reason by modifying desire [Hume]
6190 All practical reason aims at good or evil [Kant]
21059 Action rules need application judgements [Kant]
4173 Real motive is in the will, not in intellect [Schopenhauer]
6384 Causation is vital to practical reason [Davidson]
3840 There is no logic of practical reason [Searle]
4316 Reason dominates, leads or helps [Cottingham]
12627 Truth comes before action decisions [Fodor]
3546 Phronesis is intelligence, not prudence [Annas]

b. Intellectualism

5867 Knowledge of justice brings justice [Socrates]
5069 Socrates offered the first rational ethics [Taylor,R]
5836 Study and practice increase virtue [Socrates]
5840 Wisdom is necessary for good actions [Socrates]
1567 Full knowledge leads to correct action [Anon (Diss)]
1655 Life is easier if true opinion can guide us [Vlastos]
202 No one willingly does evil [Plato]
203 Courage is knowledge of what should be feared [Plato]
7813 Cynicism was simple, needing no education [Diogenes of Sin.]
3023 Even fools can have some virtue [Aristippus young]
67 Bad people are ignorant [Aristotle]
5218 Good opinions don't imply good choices [Aristotle]
81 Virtues are not principles, but imply one [Aristotle]
7352 Skip learning and follow the spirit of the Law [Jesus]
5762 If the wicked get their desire they are good [Boethius]
6248 Reason is too slow & doubtful to guide action [Hutcheson]
8257 Reason alone cannot will actions [Hume]
21787 An evil will allows no criticism [Hegel]
14820 People aim at good - within their abilities [Nietzsche]
14856 Our nature comes first, not our judgment [Nietzsche]
20133 Supposed 'motives' are superficial [Nietzsche]
16478 Cats can be paralysed with indecision [Russell]
7665 In the Enlightenment virtue is knowledge [Berlin]
15677 Morality concerns knowledge, not value [Habermas]
3815 Humans form desire-independent motives [Searle]
3839 Only internal reasons can motivate [Searle]
4377 Intellectualism over-emphasises reason [Burnyeat]
5348 Principled actor, or good character? [Flanagan]
4351 Philosophy is not essential for virtue [Hursthouse]
20012 Do the agent's reasons explain the action? [Wilson/Schpall]

c. Reasons as causes

20042 Causes of actions are reasons why [Aristotle]
5267 Reasoned acts are the most responsible [Aristotle]
21363 Motivation is causality seen from within [Schopenhauer]
19615 I want to suppress my reasons for action! [Cioran]
20075 Intentional action is caused by reasons [Davidson]
3395 The reason for an action is its cause [Davidson]
6664 When agents act, reasons are causes [Davidson]
19698 Reasons can cause, but not be the aim [Davidson]
9284 'Internal' reasons provide a motive [Williams,B]
3871 Explanation of action shows their rationality [Newton-Smith]
20064 Actions are under the control of reasons [Audi,R]
6662 Belief and desire are reasons to act [Lowe]
19519 Rational choice on evidence, or causality? [Connee/Feldman]
20060 Mental states are not causal events [Stout,R]
20055 Explain an action by showing the justification [Stout,R]
20056 Causal reasons must be internalised [Stout,R]
20013 Reason explanations seem to be causal [Wilson/Schpall]
20029 Purposes of actions may be their causes [Wilson/Schpall]
18684 Reasons to act may lack full force [Orsi]

4. Responsibility for Actions

whether motives were sufficiently good

5213 We may regret involuntary acts [Aristotle]
4384 Is responsibility just absence of restraint? [Irwin]
14061 Praise and blame rest on autonomy [Epicurus]
5009 Necessary actions are not responsible [Descartes]
5008 We act freely, and thus responsibly [Descartes]
17202 It's my action if my nature explains it [Spinoza]
21865 An action arises from our nature [Spinoza]
21868 Free will strengthens love and hate [Spinoza]
2224 Responsible acts are caused by character [Hume]
20251 The purposeful actions are least understood [Nietzsche]
20324 Freedom is breadth of knowledge and motives [Jaspers]
3442 Caused and causeless acts lack responsibility [Chisholm]
3443 Are we responsible for our bad desires? [Chisholm]
2174 Responsibility is cause,intent,state,response [Williams,B]
7096 Virtues can be admirable but involuntary [Statman]
6663 Motive, reasons, or cause explain actions [Lowe]
20048 There is relative and absolute justification [Stout,R]
20053 Acts are yours if all of you produce them [Stout,R]

21. Aesthetics

A. Aesthetic Experience

1. Aesthetics

general ideas about the study of art and beauty

8063 Baumgarten founded aesthetics in the 1750 [Baumgarten]
12157 Kant and Hegel founded aesthetics [Kant]
18549 19th C aesthetics studied art, not nature [Hegel]
21372 How is unwilling pleasure in objects possible? [Schopenhauer]
12156 Aesthetics is tied to Romanticism [Scruton]
8108 Aesthetics assumes distinctive subject matter [Gardner]
20327 Focus on the relational properties of art [Lamarque/Olson]
20416 After 1790 genius was the main aesthetic topic [Kemp]

2. Aesthetic Attitude

distinctive frame of mind in aesthetic experience

18545 Judgements of beauty are disinterested [Shaftesbury]
18552 Forget virtue;critical virtues are what matter [Hume]
18547 Only rational beings can experience beauty [Kant]
20346 The aesthetic attitude is disinterested [Kant]
22043 The point of art is its meaning [Hegel]
21370 Aesthetic experience is 'disinterested' [Schopenhauer]
7194 Seeing beauty in things distorts them [Nietzsche]
20424 Imaginative life is passive and different [Fry]
20427 What only exists to be seen is aesthetic [Fry]
5933 Aesthetic enjoyment is pleasure plus insight [Ross]
6606 Imagine this butterfly, but ugly [Wittgenstein]
20342 Critical or performative interpretation? [Wollheim]
20343 Love of nature precedes love of art [Wollheim]
20443 An aesthetic attitude is just paying attention [Dickie]
12158 The aesthetic contains our values [Scruton]
18546 Aesthetic pleasure also seeks understanding [Scruton]
18550 Art offers us impartiality [Scruton]
20387 Aesthetics needs imagination and understanding [Davies,S]

3. Taste

nature and status of good taste

12964 We can't tolerate a taste for poisons! [Leibniz]
6608 Taste needs both ability and experience [Hume]
20408 Taste in sensations is entirely personal [Kant]
20408 Judgements of beauty are universal [Kant]
20411 If it is subjective, there is no 'taste' [Kant]
14842 Why are strong tastes so contagious? [Nietzsche]
20407 Taste is the ability to judge beauty [Tarski]
12163 Traditions show relevant comparisons [Scruton]
6605 Critics need causal links to their objects [Fogelin]
20385 'Taste' explains lack of appreciation in some [Davies,S]

4. Beauty

beauty as a quality in minds and objects

299 Anything fine is difficult [Plato]
172 Beauty is irresistibly loveable [Plato]
173 Beauty and goodness are the same [Plato]
4026 Beauty is harmony with the divine [Plato]
155 Beauty is the clearest and most lovely form [Plato]
390 Goodness involves proportion, and hence beauty [Plato]
249 Beauty is physical, of lower value than virtue [Plato]
52 Beauty,benefit and pleasure guide action [Aristotle]
514 Beauty is merely animal without intelligence [Democritus (attr)]
18555 Beauty is organic wholeness [Alberti]
12925 Beauty increases with familiarity [Leibniz]
8110 Leibniz said beauty is intellectual perfection [Leibniz]
19773 Without love, what use is beauty? [Rousseau]
4025 Beauty is a pleasure, separate from good [Kant]
20412 Beauty is only judged in pure contemplation [Kant]
4182 Beauty briefly silences the will [Schopenhauer]
21488 Beauty reveals willless Forms [Schopenhauer]
20271 Beauty in art is the imitation of happiness [Nietzsche]
20433 Beauty is charm, or aesthetic approval [Fry]
21233 Beauty is what is good to admire [Moore,GE]
5928 Beauty is a power to produce experiences [Ross]
18544 Should we avoid the word 'beauty'? [Scruton]
18553 Beauty shows us what we ought to want [Scruton]
18556 Beauty is rational and educative [Scruton]
6607 Beauty without context means little [Fogelin]

5. Natural Beauty

beauty in people, life and landscape

185 Socrates despised good looks [Socrates]
183 Beauty of soul is better than physical beauty [Plato]
184 One should work up towards absolute beauty [Plato]
282 The best things are expressed only in speech [Plato]
5851 The best looking humans are strong and fast [Aristotle]
2837 Nothing contrary to nature is fine [Aristotle]
4870 Beauty enlarged can be ugly [Spinoza]
7540 Beauty reveals hidden natural laws [Goethe]
19578 Beauty needs self-illuminated perfection [Novalis]
22042 Natural beauty doesn't show freedom [Hegel]
18326 Beauty rests on inter-human pleasure [Nietzsche]
18548 Natural beauty reassures us [Scruton]

6. The Sublime

the highest level of aesthetic experience

22046 Sublime as vast, or as powerful [Kant]
21458 The sublime is a moral experience [Kant]
21928 Sublime is knowledge v beautiful threat [Schopenhauer]
20430 Art promotes neglected cosmic emotion [Fry]
20386 The sublime is both negative and positive [Davies,S]

B. Nature of Art

1. Defining Art

possibility of a general definition of art

20440 Art is indefinable, with symptoms [Goodman]
20348 Just identify art, rather than define it? [Wollheim]
20326 Can we define the essence of art? [Lamarque/Olson]
20384 The idea of 'art' began in the 1740s [Davies,S]
20390 The avant-garde ruined the art definitions [Davies,S]
20392 Art aims to cause aesthetic experiences [Davies,S]

2. Art as Form

form is the essence of works of art

636 Beauty is order, and linked to maths [Aristotle]
8118 Beauty is order of parts and whole [Baumgarten]
20431 Art need ordered and varied sensations [Fry]
8115 Only artists can discern significant form [Bell,C]
20434 Art needs aesthetic visual relations [Bell,C]
20347 Can totally simple things be beautiful? [Wollheim]

3. Art as Imitation

imitation is the essence of works of art

20423 If art is just imitation, it is trivial [Fry]
20428 Most people can't judge realism! [Fry]

4. Art as Expression

personal expression is the essence of art

8119 Art needs beauty of form, idea and expression [Winckelmann]
8120 The rainbow is inexpressive but beautiful [Herbart]
8124 Only art transmits our highest feelings [Tolstoy]
8121 Art uses signs to hand on a man's feelings [Tolstoy]
8122 True works of art transmit new feelings [Tolstoy]
14835 Artists just pretend to be passionate [Nietzsche]
20422 Expression blends with communication [Croce]
20420 Art expresses unconscious oppressive emotions [Collingwood]
20331 Art has expressive non-physical properties? [Wollheim]
20345 Expression is nameable, or sui generis? [Wollheim]
12167 Expression refers without predication [Scruton]
12165 Art as expression is Romantic [Scruton]
18551 Does art enable us to articulate intuitions? [Scruton]
20417 Is art necessary or sufficient for art? [Kemp]
20419 We lack prior knowledge of what to express [Kemp]
20418 One feeling could be expressed by many means [Kemp]
20405 Music expressions associates with feelings [Davies,S]
20403 Sad music doesn't express composer sadness [Davies,S]

5. Art as Language

art is best understood as a language

20439 Art symbols are judged by their results [Goodman]
8113 Art is like understanding language [Goodman]
12166 Predicateless music is not language [Scruton]
12162 Words have 'literary meaning' [Scruton]

6. Art as Institution

art only makes sense within a social institution

20413 Art is about culture, not about individuals [Hegel]
20328 A thing is only seen as art in an 'artworld' [Danto]
20441 Anything is art, if an art theory supports it [Danto]

20337 The genre must be understood in literature [Wollheim]
20336 Style is essential but not directly observable [Wollheim]
20329 Art is artifacts made for an artworld [Dickie]
8114 Only experts can decide what is art [Dickie]
20393 Art is defined by the art community [Davies,S]

7. Ontology of Art

in what sense varies types of art actually exist

20421 Art exists purely as experiences [Collingwood]
20438 One mistake and performances aren't instances [Goodman]
20333 Art is physical, or ideal, or phenomenal [Wollheim]
20334 Art is a shaped intuition or expression [Wollheim]
20335 Art as ideal neglects audience and medium [Wollheim]
20340 Performances have all the features of a piece [Wollheim]
8112 Art works exist in the artist's mind [Gardner]
20444 Painting is multiple, if it can be duplicated [Currie]
20330 Two types of art: abstract and physical [Lamarque/Olson]

8. The Arts

concepts and problems of specific arts

a. Music

171 Music is a form of love [Plato]
316 The purpose of music is to harmonise the soul [Plato]
5063 Music is the harmony of numbers [Leibniz]
20101 Without music life would be a mistake [Nietzsche]
20341 Interpretations add more properties to music [Wollheim]
12168 Music is not representational [Scruton]
12875 Must every note of a performance be accurate? [Simons]
20402 Music is too definite to be put into words [Davies,S]

b. Literature

16565 Poetry is superficial, not about reality [Plato]
16566 Poetry is more philosophic than history [Aristotle]
20873 Tragedies concern pain from externals [Epictetus]
22030 For poets free choice is supreme [Schlegel,F]
9814 Poetry is the rival of mathematics [Badiou]
21007 Storytelling cannot be neutral [Nussbaum]
20454 Wallace Stevens for philosophical poetry [Critchley]
21939 An 'author' is a plurality of selves [Gutting]
20927 The 'hermeneutic circle' involves the reader [Zimmermann,J]

C. Artistic Issues

1. Artistic Intentions

status of an artist's intentions in aesthetics

7270 We can recapture the author's view [Croce]
20432 Art involves sympathy with its creator [Fry]
20400 External evidence is no help for intentions [Wimsatt/Beardsley]
7266 The author's intentions are irrelevant [Wimsatt/Beardsley]
7268 Understand the poetic voice, not the poet [Wimsatt/Beardsley]
7267 Poetry needn't communicate intentions [Wimsatt/Beardsley]
7269 The intentional fallacy is a romantic one [Wimsatt/Beardsley]
7271 Biography can show us more than intentions [Wimsatt/Beardsley]
12159 Intention is basic to sculpture [Scruton]
20395 Artists decree the title and subject-matter [Davies,S]
20396 Intention is needed, to know achievement [Davies,S]
20399 Meaning is (successful?) intention [Davies,S]
20401 Audience view of intentions fixes meaning [Davies,S]

2. Copies of Art

relative nature and value of copies of artworks

20437 A new 'instance' of artworks needs notation [Goodman]
20397 Originals will always be special [Davies,S]
20398 One instance of an artwork may be necessary [Davies,S]

3. Artistic Representation

nature of representation of reality in the arts

2160 Art is two steps away from the truth [Plato]
6676 We admire resemblance to unadmirable things [Pascal]
20332 Representation needs an intention [Wollheim]
12160 Art treats truth as untrue [Scruton]

4. Emotion in Art

role of feelings in artists, works and audiences

20344 Music expresses no familiar emotions [Hanslick]
8123 Art improves the feelings of mankind [Tolstoy]
20425 Art emotions are weaker but clearer [Fry]
12164 Expressing is good, arousing is bad [Scruton]
20404 Music is sad if it arouses sadness? [Davies,S]

5. Objectivism in Art

possibility that aesthetic judgements can be true

2824 Groups of people are the best judge of art [Aristotle]
6611 One man's meat is another man's poison [Lucretius]
5643 We must treat aesthetics as objective [Kant]
20410 Aesthetic judgement is sensual, not cognitive [Kant]
21927 Ideas, not feeling, matter in art [Schopenhauer]
12161 Conventions are objective, traditions aren't [Scruton]
8111 Pleasure is in us, but essential to art [Gardner]
6604 'It's all taste' ignores the particulars [Fogelin]

6. Value of Art

value of art for individuals and in society

2135 Truth is closely related to proportion [Plato]
2163 Artists stir up the irrational against reason [Plato]
20394 Art reveals Spirit to itself [Hegel]
21794 Art expresses the unity of human life [Hegel]
20415 Art is the link between nature and thought [Hegel]
8116 Art can liberate us from selfhood [Schopenhauer]
4174 Art's purpose is to reveal humanity's beauty [Schopenhauer]
7276 All art is quite useless [Wilde]
20406 Art brings self-knowledge to the artist [Collingwood]
20436 Art leads to mental health [Beardsley,M]
7980 Uselessness creates modern beauty [Baudrillard]

7. Art and Morality

relationship between moral and aesthetic values

468 Music can reveal virtues [Damon of Ath.]
297 Beauty leads to goodness [Plato]
8239 A King is promising if he likes music [Mencius (Mengzi)]
635 Good is active, but beauty can be static [Aristotle]
3044 Beauty is the good, and they are identical [Chrysippus]
1907 Stoics have one word for beauty and good [Bury]
22022 Beauty harmonises feeling and reason [Schiller]
8125 Upper classes put beauty before goodness [Tolstoy]
8064 Nowadays beauty and goodness are separated [Tolstoy]
7274 Judge books by writing, not morality [Wilde]
7275 Moral feeling is a weakness in artists [Wilde]
20426 Harmless art is still bad for moralists [Fry]
20456 Interesting art is always ethical [Critchley]

22. Metaethics

A. Value

1. Nature of Value

what are values, and what is their basis?

a. Nature of value

4370 For Aristotle 'telos' is the good [Achtenberg]
20846 Prime values are universal; others are useful [Stoic school]
20160 Kant focuses too much on human values [Kekes]
5920 Is value a quality or a relation? [Ross]
5923 Value's a quality not an objective or relation [Ross]
20762 There are no values [Sartre]
19646 Values are changed, not accumulated [Cioran]
21749 Atruism for person, ceremony for society [Quine]
18681 Ground, catalyst and intensifier of values [Dancy,J]
20150 Values are optional possibilities [Kekes]
20156 We regret neglecting some values [Kekes]
20158 Values from humanity, culture, individuals [Kekes]
20159 Interpretation,conduct,practices,evaluations [Kekes]
20161 Values hit evil, disenchantment, boredom [Kekes]
18666 Value-makers describe and value [Orsi]
18667 'able' concepts indicate correct responses [Orsi]
18679 Something must make a thing valuable [Orsi]
18682 Whole values aren't sums of part values [Orsi]
18683 Two values are better, worse, or the same [Orsi]
18685 Values are either final or personal [Orsi]
18686 Values are byproducts of fitting attitudes [Orsi]

b. Fact and value

4547 Plato measures reality by value [Nietzsche]
4008 Science and morality used to be unified [Hume]
8067 Is going from 'is' to 'owes' or 'needs' hard? [Anscombe]
4578 You can't deduce 'ought' from 'is' [Hume]
4581 Virtues are secondary qualities [Hume]
5576 Experience cannot reveal moral laws [Kant]
22203 Only facts follow from facts [Husserl]

22155 Science can't handle values [Weber]
20748 A thing's involvement is disclosed immediately [Heidegger]
20928 Facts are integrated into personal values [Gadamer]
7624 'Inconsiderate' shows facts and values blur [Putnam]
3835 If it is true, you ought to believe it [Searle]
3836 This is a man, so that ought to be one [Searle]
4135 'Treachery' unites facts and values [Williams,B]
8012 Most social facts involve values [MacIntyre]
21837 Normative ethics spots best practices [Flanagan]
4937 Values are basic features of a brain [Edelman/Tononi]
4770 We apply inner sensations to external objects [Psillos]
22156 Facts about health establish values [Boulter]

c. Objective value

6227 Keeping promises is a natural obligation [Cudworth]
18676 What is good when totally isolated? [Moore,GE]
5918 Is an isolated thing intrinsically good? [Ross]
5930 We prefer it if the virtuous are happy [Ross]
2942 The sense of the world is outside the world [Wittgenstein]
3257 Subjective values are part of objective data [Nagel]
18672 Values can have the 'wrong kind of reasons' [Orsi]

d. Subjective value

20847 Appraiser's value is what is set by experts [Stoic school]
6677 Imagination creates our supreme goods [Pascal]
4845 The good is what we desire, not vice versa [Spinoza]
9749 We are important, so choice confers value [Kant]
7671 Values are made by choices, not qualities [Kant]
22023 Nothing counts unless we give it status [Fichte]
4181 All good is relative to a desiring will [Schopenhauer]
20370 All vlaue aims at the survival of something [Nietzsche]
20354 The dominant drives want to control values [Nietzsche]
22228 Freedom is not whimsy, but responsibility [Sartre]
3852 Freedom is the foundation of all values [Sartre]
9232 We create importance by caring [Frankfurt]
9234 We must care about something, to get started [Frankfurt]
8109 Aesthetics, unlike ethics, must be first-hand [Gardner]

e. Means and ends

419 Only hope achieves the unexpected [Heraclitus]
18227 What is final is intrinsically desirable [Aristotle]
4381 Are good acts just a means to eudaimonia? [Ackrill]
7201 Only a goal can make something valuable [Nietzsche]
6674 Moral judgements ultimately concern ends [Rashdall]
5922 Instrumental good varies with circumstances [Ross]

f. Ultimate value

18230 We choose life for the intrinsically valuable [Aristotle]
20863 The goal is to 'live in agreement' [Zeno of Citium]
20864 Live according to experience of nature [Chrysippus]
20870 Live consistently with human constitution [Stoic school]
6209 There is no absolute good, even that of God [Hobbes]
6221 Two good actions cannot conflict [Cumberland]
18675 Do good will and deserving happiness clash? [Orsi]
22007 Autonomous agents have an absolute value [Kant]
18234 Only a good will can found values [Kant]
6192 Good is not a state, but involves actions [Kant]
18239 Contemplation can't be the highest value [Kant]
18238 Only a good will gives anything a purpose [Kant]
21431 Moral perfection requires the love of man [Kant]
21437 Morals love others' ends and respect rights [Kant]
7669 Humans cannot attain every possible ideal [Herder]
5649 Willing is transient, with no ultimate aim [Schopenhauer]
9233 Criteria for lifestyles are life values [Frankfurt]
9229 Intrinsic value may still be low [Frankfurt]
18648 Following our own good is ultimate [Nozick]
20151 Values show possibilities, and limits [Kekes]
20152 Unconditional commitments are basic [Kekes]
20153 The unthinkable is more basic than values [Kekes]
18541 Goodness and truth yes - but beauty? [Scruton]
18228 Are ends valuable because useless? [Korsgaard]
18225 We can reason on what value is ultimate [Korsgaard]
18677 Final values may still be derivative [Orsi]

2. Values

the most important values in ethical thinking

a. Normativity

21455 There is no 'what ought to be' in nature [Kant]
5336 Ethics is the science of flourishing [Flanagan]
18497 No truthmakers for normative judgements? [Heil]

18668 Value truths tell us what to do or think [Orsi]
18670 Buck-Passing: other properties make values [Orsi]
18669 'Good' means it is fitting to favour it [Orsi]

b. Valuing life

20243 Human origins and aims are not majestic [Nietzsche]
2893 The wise agree that life is worthless [Nietzsche]
18308 The value of life shouldn't be a problem [Nietzsche]
2895 The value of life cannot be estimated [Nietzsche]
2894 Value judgements on life can never be true [Nietzsche]
18321 Life must be evaluated externally [Nietzsche]
18322 Life creates its values through us [Nietzsche]
20282 Human life is sacred as species or as persons [Singer]
4661 Life isn't sacred or a right but good & wanted [Glover]

c. Health

3053 Virtue is harmony, and health, and God [Pythagoras]
495 Wisdom creates a healthy passion-free soul [Democritus]
2129 Goodness is a state of mental health [Plato]
5154 Seek the mean in virtue, as in health [Aristotle]
5268 Diseased people like bad pleasures [Aristotle]
5870 Everything seeks its own separate good [Aristotle]
502 Good breeding means have a good character [Democritus (attr)]
22238 Health is a preferable indifferent [Stoic school]
20861 Health of the soul is a good blend of beliefs [Stoic school]
22239 We learned virtue from observing health [Seneca]
22237 Greeks unified beauty and goodness [Pormann]

d. Altruism

1590 Just men never even harm their enemies [Plato]
90 Friendship is an extension of self-love [Aristotle]
3553 The highest self-concern is impartiality [Stoic school]
6244 Humans never feel total disinterested malice [Hutcheson]
3926 People naturally desire public good [Hume]
3717 Reverence demolishes my self-love [Kant]
3720 We cannot know if our motives are ignoble [Kant]
4185 Altruistic people are closer to others [Schopenhauer]
14831 Pure altruism has never existed [Nietzsche]
7205 Altruism is based on egoism of the weak [Nietzsche]
4505 Universal altruism is contradictory [Nietzsche]
5316 We spread altruism by rewarding it [Wilson,EO]
5318 Kin selection altruism opposes civilisation [Wilson,EO]
3263 Pure altruism can't possibly give life meaning [Nagel]
21830 Altruism is contracts, or genetics [Flanagan]
9781 Love of neighbours is avoidance of them [Zizek]

e. Love

19941 Love your neighbour as yourself [Anon (Leviticus)]
6327 Do good to him who has done you an injury [Lao Tzu]
14177 Love motivates merit and happiness [Plato]
176 Wisdom is loved because it is beautiful [Plato]
179 Love is the desire for good [Plato]
5262 Only lovable things are loved [Aristotle]
5263 Most would rather be loved than love [Aristotle]
507 True love is desire for beauty [Democritus (attr)]
7894 Hate is conquered by love [Anon (Dham)]
20851 Virtuous men do not feel mere physical desire [Stoic school]
6289 Love your enemies [Jesus]
6292 Love thy neighbour as thyself [Jesus]
13321 Being loved increases self-love [Seneca]
18448 Maybe dream of love, but don't taste it [Porphyry]
4348 Love, and do what you will [Augustine]
2359 Love is merely desire with its object present [Hobbes]
7912 The effects of love look like hatred [Rochefoucauld]
4848 Love is an idea of pleasure's external cause [Spinoza]
17217 Love is joy with an external cause [Spinoza]
12958 Love is pleasure in success of the object [Leibniz]
21429 Love is accepting the ends of others [Kant]
22071 Love is ironically finite and infinite [Schlegel,F]
6927 Without love external existence can't matter [Feuerbach]
15998 Love should include love of imperfections [Kierkegaard]
16003 Marrying to avoid loneliness is self-love [Kierkegaard]
14855 Respect admits power, but love does not [Nietzsche]
20236 Marriage pretends that love is enduring [Nietzsche]
20252 Love distorts reasons for marriage! [Nietzsche]
20263 Fear reveals more of people than love does [Nietzsche]
18301 We only really love children and work [Nietzsche]
20113 Love is better than always being right [Nietzsche]
18319 Love is sensuality spiritualised [Nietzsche]

21746 Unlike hate, love satisfies desires [Russell]
22233 Love is the demand to be loved [Sartre]
19614 Love is hateful, but highlights mortality [Cioran]
9252 Increase of love increases the absurd [Camus]
21751 Love diminishes with distance from me [Quine]
9235 Love creates value, not vice versa [Frankfurt]
9236 Love won't entail heat, or liking [Frankfurt]
9237 Parental love is purer than romantic [Frankfurt]
9239 Love for my children has intrinsic value [Frankfurt]

f. Fine deeds

5837 Good and fine are the same [Socrates]
5845 Homer's poems are a guide to goodness [Xenophon]
139 Good brings success, and hence happiness [Plato]
5142 Children and animals cannot be happy [Aristotle]
2689 Virtue should attract like good music [Aristotle]
101 Slaves can't be happy, lacking freedom [Aristotle]
3562 The value of fineness is only pleasure [Epicurus]
7499 Stoicism aimed at a beautiful life [Stoic school]
14815 Noble actions give enormous pleasure [Nietzsche]
7501 A person's life could be a work of art [Foucault]

g. Self interest

128 Nature approves of selfish desires [Plato]
12 Virtue is mere hypocrisy [Plato]
2168 Clever criminals can't flourish forever [Plato]
3559 Good self-love is of the higher soul [Aristotle]
5243 The best people are virtuous to others [Aristotle]
92 Self-love leads to altruistic fine actions [Aristotle]
2810 Selfishness is an excess of self-love [Aristotle]
7398 Use force to be a shipwreck's survivor [Carneades]
13292 Living for others is happiness [Seneca]
2370 All voluntary acts are selfish [Hobbes]
7833 Self-interest is the only source of value [Spinoza]
6243 Why care about others at the end of our life? [Hutcheson]
3650 Total selfishness is not irrational [Hume]
4183 Self-love drives and kills morality [Schopenhauer]
7141 A living being is totally 'egoistic' [Nietzsche]
2886 Psychological egoism is nonsense [Nietzsche]
9760 Self-concern - pain,respect,responsibility [Korsgaard]

B. The Good

1. Goodness

identifying the essence of what is good

a. Form of the Good

21819 The Good, then Nous, then Soul [Homer]
295 The good is beautiful [Plato]
2137 All value and advantage derives from goodness [Plato]
4007 The Good replaces honour and pleasure [Plato]
2139 The Good is the goal of all activities [Plato]
2143 The sun in the world - goodness in the mind [Plato]
2144 Goodness makes truth and knowledge possible [Plato]
2147 All values and good conduct derive from Good [Plato]
2164 Bad is destruction, good is preservation [Plato]
391 Goodness requires beauty, proportion and truth [Plato]
392 Neither intellect nor pleasure is the good [Plato]
3032 The Good of Plato is quite baffling [Amphis]
20 Good is what everything aims at [Aristotle]
5128 Not one Good, but a good for each category [Aristotle]
5129 Many sciences implies many goods [Aristotle]
629 Is the good a purpose, a mover, or a form? [Aristotle]
5999 The good is what is perfect [Diogenes of Babylon]
11057 Natural being good is an open question [Moore,GE]
5921 We can't ask if goodness is valuable [Ross]
21891 Good is always violent, against evil [Derrida]

b. Types of good

3028 The chief good is unity, seen in many ways [Euclides]
9274 Plato gave us Beauty, Good and True [Plato]
393 The six goods have a rank order [Plato]
5110 Goodness of a thing is its natural completion [Aristotle]
5131 Intelligence,sight,pleasure,honour:innate good [Aristotle]
5135 The main good for man is that of the soul [Aristotle]
20843 Stoics list seven final goods [Stoic school]
7821 Three hundred versions of the highest good [Augustine]
12957 Good is virtue, pleasure, utility [Leibniz]
8117 Perfections are Beauty, Goodness and Truth [Baumgarten]
19450 The aims of life are reason, love and will [Feuerbach]
21747 Good combines love and knowledge [Russell]

5925 Only good, right and beauty have true value [Moore,GE]
5910 The goods are virtue, knowledge and pleasure [Ross]
5932 Virtue, pleasure, justice & knowledge are good [Ross]
18224 Goodness: mental state, or a property? [Korsgaard]

c. Right and good

7409 Talk of rights, not of the good [Hobbes]
5901 Does happiness define 'right' or cause it? [Ross]
2882 People were valued first, actions much later [Nietzsche]
5902 'Right' is what produces good [Moore,GE]
5903 'Right' means 'useful' [Moore,GE]
5898 'Right' and 'good' differ in meaning [Ross]
5899 An act may be right, but not a duty [Ross]
5904 'Right' used to be conventional acceptance [Ross]
5919 Goodness extends beyond morality [Ross]
5941 Good concerns motive, right concerns outcome [Ross]
15676 The right is prior to the good [Rawls]
18650 Which comes first - the good, or people? [Kymlicka]

d. Good as virtue

177 Goodness brings happiness [Plato]
5972 Happiness is just virtuous living [Chrysippus]
2903 Virtue is a consequence of happiness [Nietzsche]
5938 Virtue is a duty, but pleasure is not [Ross]
5121 Ethics of flourishing is consequentialist [Harman]
4358 Is virtue necessary/sufficient for eudaimonia? [Hursthouse]

e. Good as knowledge

3017 Good is knowledge; evil is ignorance [Socrates]
301 Knowledge is the only good [Plato]
2138 Pleasure and knowledge are possibly the Good [Plato]
7915 The cleverest people understand values [Rochefoucauld]
5931 Understanding improves a universe [Ross]
5939 Good morals require a love of truth [Ross]

f. Good as pleasure

415 Pleasure is too animal-like for our happiness [Heraclitus]
1537 Happiness is good judgement of pleasures [Democritus]
4322 In drinking good and pleasure are separate [Plato]
136 Good (not pleasure) is the aim of action [Plato]
94 Pleasure not the good;intelligence improves it [Plato]
2070 Bad pleasures prove pleasure isn't the good [Plato]
23 Pleasure is the popular choice for the Good [Aristotle]
5269 Pleasure is not the Good [Aristotle]
1833 Pleasure all that's required for happiness [Epicurus]
14057 Pleasure is good, but not always best [Epicurus]
14058 Aim for lack of pain and calm mind [Epicurus]
1840 Animals without reason choose pleasure [Epicurus]
1777 There are bad pleasure, so it isn't the good [Chrysippus]
5973 Pleasure as the goal makes justice impossible [Chrysippus]
21870 Music can be good, bad or indifferent [Spinoza]
3256 Goodness isn't a separate non-natural property [Nagel]

g. Consequentialism

1562 It is sometimes right to lie to your parents [Anon (Diss)]
265 Actions are judged by the doer's character [Plato]
109 Intention & consequence have equal importance [Aristotle]
5877 Hidden choices matter more than deeds [Aristotle]
1851 Action aims at good, as thought aims at truth [Aquinas]
19366 Moral judgement need virtue and vice [Leibniz]
6233 A character is judged by its feelings [Shaftesbury]
6246 I must intend an effect to make an act good [Hutcheson]
3712 Achievement does not decide if a will is good [Kant]
3725 Good is in intention, not consequences [Kant]
6197 Morality concerns law, not desirable outcomes [Kant]
3767 Judge agents by motive, not actions [Mill]
2872 In the past only consequences judged an action [Nietzsche]
4509 Both intentions AND consequences are unknown [Nietzsche]
4120 We want good acts, not just states of affairs [Williams,B]
5122 Normal morals are not consequentialist [Harman]
3785 You can't separate act and actor [Glover]
6698 Negative consequences are hopeless to assess [Graham]
7590 Value matters more than obligation [Scruton]
4337 Teenagers are daft about consequences [Hursthouse]
6853 Act and consequences are not separate [Crisp,R]

h. Good as benefit

193 Good things don't have to be beneficial [Plato]
26 Wealth not the good, since means not end [Aristotle]
19752 Be kind to sentient beings [Rousseau]
20278 Being in short supply increases utility [Singer]

3786 Actions may benefit but also corrupt [Glover]

i. Moral luck

269 Moral luck should influence judgement a little [Plato]

14063 Decisions matter more than their results [Epicurus]

5126 We condemn acts with bad outcome more [Smith,A]

20233 Punishment warps the contingency of events [Nietzsche]

4426 Bad results distort judgement of an action [Nietzsche]

3272 Moral luck has four different elements [Nagel]

6700 Unforeseeable consequences must be forgiven [Graham]

20193 Moral luck puts blame beyond our control [Zagzebski]

2. Happiness

happiness or 'eudaimonia' as the aim of life

a. Nature of happiness

25 Pure goodness is not happiness [Aristotle]

5136 Happiness may need virtue and pleasure [Aristotle]

5868 Animals can never be happy [Aristotle]

13550 Being always happy is ignorance [Seneca]

13303 We're as unhappy as we think we are [Seneca]

6922 Ecstasy is the highest state of man [Plotinus]

5756 Happiness leaves no more desires [Boethius]

12927 Happiness is advancement towards perfection [Leibniz]

6252 Happiness is sustained pleasant sensation [Hutcheson]

6193 Happiness is satisfaction with our whole life [Kant]

1452 Happiness is getting what you want [Kant]

4172 Happiness is swift satisfaction [Schopenhauer]

7168 For some 'not bad' is happiness [Nietzsche]

5079 Happiness has no location or moment [Taylor,R]

b. Eudaimonia

1646 Socrates founded eudaimonist ethics [Socrates]

14178 Happiness is enjoying goodness and beauty [Plato]

18673 Eudaimonia uniquely has exclusive final value [Aristotle]

5127 Aristotle noting eudaimonia or recommending? [McDowell]

5143 Living and dead can be unaware of evils [Aristotle]

5996 Aim at fulfilment, not happiness [Crito]laus]

13302 Life is like a play - quality, not length! [Seneca]

5068 Eudaimonia is having a good demon [Taylor,R]

5120 Things 'flourish' relative to some values [Harman]

8005 Eudaimonia includes behaving and faring well [MacIntyre]

21836 Later Aristotelians endorse mental health [Nussbaum]

21835 Eudaimonics: empirical studies of flourishing [Flanagan]

20199 Are personal and community flourishing linked? [Zagzebski]

4324 Plants can flourish, but not be 'eudaimon' [Hursthouse]

7099 Is flourishing possible without the virtues? [Statman]

c. Value of happiness

2681 Aristotle has two sorts of eudaimonia [Nagel]

5132 Only happiness is chosen just for itself [Aristotle]

30 Happiness is the good for man [Aristotle]

14522 Think about achieving your desires [Epicurus]

6210 Our desires mean life has no end [Hobbes]

1386 Consciousness must focus on pleasure and pain [Locke]

1454 Morality aims at being worthy of happiness [Kant]

21061 Duty implies universal happiness as end [Kant]

18307 I want my work, not happiness! [Nietzsche]

4500 Eudaimonism is a sign of degeneration [Nietzsche]

4558 Neither we nor worms have a right to happiness [Nietzsche]

2891 Only Englishmen strive after happiness [Nietzsche]

7983 Good/evil has become happiness/misfortune [Baudrillard]

d. Routes to happiness

5835 Freedom is the route to happiness [Aristippus elder]

17947 Happiness is the philosophical life [Plato]

332 Both mind and body should be exercised [Plato]

7812 Self-government, indifference and independence [Diogenes of Sinope]

5850 Happiness if a collection of benefits [Aristotle]

5139 Happiness is open to almost anyone [Aristotle]

39 Only a complete life can be happy [Aristotle]

5144 Happiness is long virtue with externals [Aristotle]

100 Happiness and goodness are serious matters [Aristotle]

106 The best life is an intellectual one [Aristotle]

5865 Happiness is wisdom, virtue and pleasure [Aristotle]

14059 Reason and right opinion, not sensuality [Epicurus]

20865 Happiness, by virtue, agreement and nature [Stoic school]

6678 We ignore the present, so are never happy [Pascal]

7917 Knowing future misery is a kind of happiness [Rochefoucauld]

4860 Perfecting our reason is happiness [Spinoza]

5019 Perfecting ourselves is human happiness [Leibniz]

7538 Link the end of life to its beginning [Goethe]

21371 There is no happiness when we will [Schopenhauer]

7076 Happy if all our aims are realised? [Mill]

14884 The shortest route to happiness: forgetfulness [Nietzsche]

14849 Happy human moments, but not eras [Nietzsche]

7159 Happiness needs illusion to be possible [Nietzsche]

5655 Happiness is fulfilment of values [Bradley]

21743 Hating enemies in war brings happiness [Russell]

20180 Happiness largely needs a quiet life [Russell]

9227 We want character and health, not just virtue [Frankfurt]

4650 Length of life affects quality [Glover]

20154 Control is the key to well-being [Kekes]

20157 Well-being needs right values and commitments [Kekes]

3. Pleasure

value of enjoyable inner feelings

a. Nature of pleasure

385 Pleasure and pain can be false [Plato]

4374 Pleasure is seeing things as valuable [Achtenberg]

4376 Pleasure is a perception of goodness [Aristotle]

1835 Avoid pain, and confusion of the soul [Epicurus]

4847 Pleasure is increase of mental perfection [Spinoza]

5049 Intelligent pleasure is perception of beauty [Leibniz]

12962 Pleasure is a sense of perfection [Leibniz]

7197 Pleasure needs dissatisfaction and limits [Nietzsche]

4550 To achieve, one must desire pain [Nietzsche]

9230 People want to sustain their desires [Frankfurt]

b. Types of pleasure

2157 Pleasant smells have no contrasting pain [Plato]

387 Pure small pleasures are by far the best [Plato]

5230 Pleasure are of the soul and of the body [Aristotle]

383 God feels one simple pleasure forever [Aristotle]

5270 Intellectual pleasures are superior to senses [Aristotle]

1839 Pains of the soul are worse than bodily pain [Epicurus]

1842 All pleasures are essentially equal [Epicurus]

505 Good and true are constant; pleasures differ [Democritus (attr)]

521 Choose only pleasures involving beauty [Democritus (attr)]

1838 Pleasure is either a motion, or a condition [Diog. Laertius]

5934 Only intensity and duration of pleasure matter [Ross]

5271 Push-pin and poetry have equal value [Bentham]

8096 He gives his body to pleasure, not his soul [Joubert]

9196 Existing is the only true pleasure [Hadot]

7498 Food used to matter much more than sex [Foucault]

3557 The end for Epicurus is static pleasure [Annas]

c. Value of pleasure

8142 The wise prefer good to pleasure [Anon (Upan)]

197 Pleasure and pain differ from good and evil [Plato]

200 Common men justify everything by pleasure [Plato]

2134 Philosophers love mental pleasure not physical [Plato]

157 Physical pleasure is usually preceded by pain [Plato]

371 Reason is a higher good than pleasure [Plato]

373 Pleasure is nice, but rarely good [Plato]

376 Reason without pleasure? Vice versa? [Plato]

379 Pleasure and intellect are not self-sufficient [Plato]

382 Gods probably don't feel pleasure [Plato]

240 The gods reward justice, not pleasure [Plato]

5259 If bodily pleasure is bad, why is bodily pain? [Aristotle]

96 No one wants to be a child for the pleasure [Aristotle]

97 We want things that offer no pleasure [Aristotle]

98 Pleasure does enhance life [Aristotle]

99 We don't struggle in life for trivial pleasure [Aristotle]

14056 Only the pain of desire demands pleasure [Epicurus]

508 Accept no pleasure unless it is beneficial [Democritus (attr)]

20845 Pleasure can be shameful, so is not good [Chrysippus]

20840 Pleasure is a byproduct of what is suitable [Stoic school]

3071 Virtues oppose pleasure but not justice [Aurelius]

8104 How will pleasure look with hindsight? [Joubert]

21466 Pleasure is always a bit disappointing [Schopenhauer]

5905 We also value character and understanding [Ross]

5929 It matters how pleasure is acquired [Ross]

d. Sources of pleasure

2156 The mind generates three different pleasures [Plato]

381 Pleasure is the attainment of harmony [Plato]

5256 The naturally unpleasant can become pleasant [Aristotle]

5258 There are replenishing and absolute pleasures [Aristotle]

520 Noble works give the greatest pleasure [Democritus (attr)]

522 Moderation improves pleasure [Democritus (attr)]

6236 Social pleasures are better than sensual ones [Shaftesbury]

3547 Achieve pleasure by developing character [Annas]

4907 There may be a pleasure centre in the brain [Carter,R]

e. Role of pleasure

134 Pleasure is not relevant to morality [Plato]

361 It is a mistake that strong feeling is reality [Plato]

386 Capacity for intense feeling is bad, not good [Plato]

328 Everything natural is pleasant [Plato]

49 Pleasure in action indicates disposition [Aristotle]

53 Morality comes from correct pain and pleasure [Aristotle]

3563 Pleasure and virtue entail one another [Epicurus]

506 Immoderate desire is childish [Democritus (attr)]

5705 We seek only pleasure and no pain [Lucretius]

13301 Pleasure staves off fear of death [Seneca]

1478 Animals like to breed not have sexual pleasure [Plutarch]

3777 Pleasure and pain control duty and desires [Bentham]

f. Dangers of pleasure

5155 Pleasure is the toughest opponent [Heraclitus]

442 Pleasures drown us like pirates [Epicharmus]

1664 Sooner madness than experience pleasure [Antisthenes (I)]

4319 Fool's submit to insatiable desire [Plato]

132 Eternal scratching isn't true happiness [Plato]

2123 Pleasures prevents achievement of the virtues [Plato]

2158 Pleasure-seeking is addiction to the unreal [Plato]

264 Pleasure should be conquered [Plato]

84 Pleasure makes thinking difficult [Aristotle]

523 Bravery requires resistance to pleasure [Democritus (attr)]

7899 Pleasure is insatiable, and leads to pain [Anon (Dham)]

20852 Rapture is a breakdown of virtue [Stoic school]

13323 Pleasure seeks unorthodox novelties [Seneca]

4859 Pleasure is bad if it hinders action [Spinoza]

C. Ethics Foundations

1. Nature of Ethics

what is an ethical code?

a. Preconditions for ethics

168 Soul is required to understand morality [Plato]

5026 Morality requires self-reflection [Leibniz]

3954 Wickedness is in the will, not in actions [Berkeley]

5599 Morality needs God, free will and creation [Kant]

21415 Duty presupposes moral feelings [Kant]

2902 Healthy morality is an instinct for life [Nietzsche]

20739 First in philosophy is vulnerable faces [Levinas]

6450 Morality should be intrinsically motivating [Nagel]

4284 Morality is build on seeing our dependence [Scruton]

b. Defining ethics

2141 Give up trying to define goodness [Plato]

19582 Morality and philosophy are mutually dependent [Novalis]

14784 Ethics is the science of aims [Peirce]

7136 Morality is values that accompany life [Nietzsche]

8039 Moore doesn't understand 'definition' [MacIntyre]

2943 Ethics cannot be put into words [Wittgenstein]

6968 Ethical facts are seen as queer facts [Ayer]

6972 Right attitudes are those we stand by [Ayer]

7419 Ethics is the practice of freedom [Foucault]

5319 There are six stages in moral development [Kohlberg]

4003 Selfhood and morality are intertwined [Taylor,C]

20289 Ethics requires universal impartiality [Singer]

18665 Moral problems are responsibility conflicts [Gilligan]

21788 Morality is individual, ethics is social [Houlgate]

c. Purpose of ethics

21380 We must see that non-existence is better [Schopenhauer]

9261 The 'Ethics' doesn't show us our duties [Prichard]

19628 At peak moments we are absorbed in values [Cioran]

8059 Human good is the quest for the good life [MacIntyre]

6850 Decency was Wittgenstein's big aim in life [Monk]

19738 Values aim to achieve control [Kekes]

20145 Values help us to control life [Kekes]

d. Ethical theory

302 What knowledge leads to a fine life? [Plato]

45 Moral practice is preferable to theory [Aristotle]

46 Duty to act rightly is taken for granted [Aristotle]

5153 There is no fixed art of good conduct [Aristotle]

7407 Good is what pleases, goodness its power [Hobbes]

4130 One can demand a reason for any moral rule [Locke]
21374 Ethical theory can't make people good [Schopenhauer]
20230 Criticise morality? That's immoral! [Nietzsche]
21740 I doubt whether ethics is part of philosophy [Russell]
6973 All moral theories are meta-ethical [Ayer]
6974 Moral philosophy can't imply moral judgements [Ayer]
9250 Theory and moral behaviour are separate [Camus]
9228 No point in ranking trivial desires [Frankfurt]
5310 Philosophers ignore the origins of ethics [Wilson,EO]
5078 Explain 'right' without divine law? [Taylor,R]
5067 Obligation implies a powerful being [Taylor,R]
4114 Ethics is too complex to be theorised [Williams,B]
6997 Moral terms get meaning by their role [Jackson]
7000 Are thin or thick concepts conceptually prior? [Jackson]
3284 There is no single theory for moral decisions [Nagel]
8034 We don't understand our own moral talk [MacIntyre]
8036 Evaluations do not depend on context [MacIntyre]
8049 Morality is an anachronism [MacIntyre]
11911 Morality of nature, or do we want more? [Blackburn]
20216 Modern ethics concerns conflict settlement [Zagzebski]
20447 Ethics concerns motivation, not justification [Crichtley]
7098 Is a moral theory possible? [Statman]

e. Ethical cognitivism

429 All seems good to God, but not to us [Heraclitus]
5911 Moral duties are fundamental to reality [Ross]
5926 Beauty might be a key fact about a patch [Ross]
5355 For cognitivists morals are known by reason [Flanagan]
15190 There's evil, or its illusion is evil [Le Poidevin]

f. Ethical non-cognitivism

4867 Natural beauty and order are human ideas [Spinoza]
7163 Morality is just extra-moral interpretations [Nietzsche]
18311 Philosophers all want self-sufficient values [Nietzsche]
18324 The facts of moralists don't exist [Nietzsche]
4761 No moral facts, so no moral knowledge [Mackie]

g. Moral responsibility

3026 Cyrenaics never blame wrong-doers [Aristippus young]
7814 Free will is central to ethics [Epicurus]
525 We should be virtuous even when alone [Democritus (attr)]
20838 Fate is general, but we choose actions [Chrysippus]
21678 No praise or blame without choices [Cicero]
5770 Reward and punishment needs free will [Boethius]
1850 Without free will all ethics is impossible [Aquinas]
7496 Duties and rules only concern the will [Montaigne]
7569 Memory and self-consciousness permit morality [Leibniz]
2225 Free will means acts don't come from character [Hume]
2226 Repentance proves responsibility in character [Hume]
7235 Moral significance needs freedom of the will [Rousseau]
21378 We clearly feel responsible for our own deeds [Schopenhauer]
7222 Violent people should not get drunk [Mill]
14807 Freedom and responsibility are big errors [Nietzsche]
14824 We shouldn't bother to praise actions [Nietzsche]
14823 Don't base human nobility on responsibility! [Nietzsche]
4521 No ancient had the courage to deny free will [Nietzsche]
2904 Free will is invented in order to punish [Nietzsche]
20166 Responsibility is intention and self-awareness [Hampshire]
9270 'Wantons' lack second-order volitions [Frankfurt]
9269 Moral responsibility does not need free will [Frankfurt]
20168 Blamed agents must feel it's justified [Williams,B]
20167 Blame needs agents to know their duties [Williams,B]
2178 Guilt points outwards, shame inwards [Williams,B]
6699 Consequences and responsibility are different [Graham]
20170 Responsibility is foreseeable vicious harm [Kekes]

h. Against ethics

7358 People prefer appearances to excellence [Confucius]
12294 Good and evil are the same thing [Heraclitus]
3558 For Cyrenaics there is no moral end [Aristippus elder]
6040 Human life has no goal [Aenesidemus]
20234 Morality stultifies life [Nietzsche]
3793 What is the value of moral values? [Nietzsche]

2. Source of Ethics

the cause or grounding of ethical thinking

a. Idealistic ethics

1869 The Good is a wordless revelation [Plato]
13558 The highest good is harmony of spirit [Seneca]
2860 The Good is the most lethal of all inventions [Nietzsche]

22151 Open Question, then anti-realism and fact-value [Boulter]
8033 Why is goodness a reason for action? [MacIntyre]
8032 Is a good friend like a good watch? [MacIntyre]
11056 Can natural qualities define 'good'? [Moore,GE]

b. Rational ethics

21826 There is a permanent Right, for reasoning [Plotinus]
22112 Good is the rational, bad the irrational [Aquinas]
21872 Virtue is rational advantage-seeking [Spinoza]
21873 Men agree if they follow reason [Spinoza]
17224 Adequate ideas make evil unthinkable [Spinoza]
12473 Every moral rule must have a reason [Locke]
12495 Pursuit of happiness is a perfection [Locke]
12541 Moral essences enable demonstrations [Locke]
19769 Ordinary morality can't be reasoned [Rousseau]
5074 Kant based law on reason, not faith [Taylor,R]
8024 Kant is silent about our values [MacIntyre]
18235 Only reason can confer value [Kant]
21375 Criminality can be very rational [Schopenhauer]
21915 Morality from reason is blasphemous [Schopenhauer]
14812 Morality needs memory and imagination [Nietzsche]
2921 Philosophy explores limits; values are beyond [Nietzsche]
20572 There is no rational argument against murder [Adorno/Horkheimer]
9238 Moral and rational disapproval differ totally [Frankfurt]
8045 Enlightenment failure explains our morality [MacIntyre]
12037 Medea is reason v passion [Annas]
20165 Ideological evil is rational [Kekes]
20171 We judge practical reason by 'success' [Kekes]
20175 Conflicts produce irrational immorality? [Kekes]
18678 Final values are valued by the rational [Korsgaard]
15675 Morally condemn bad reasoners? [Finlayson]

c. Ethical intuitionism

7503 Plato never refers to examining the conscience [Plato]
6237 Conscience is natural, not fear of God [Shaftesbury]
8066 Conscience can be hugely misleading [Anscombe]
6238 We have a superior moral sense [Hutcheson]
6239 Traitors who help us are still condemned [Hutcheson]
6240 Moral sense is disinterested response [Hutcheson]
6242 We cannot choose our moral feelings [Hutcheson]
6247 We all hate others' pain unless it is deserved [Hutcheson]
6256 Can the moral sense make mistakes? [Hutcheson]
7258 Richard Price is intuitionism's forefather [Price,R]
21786 Conscience knows and affirms right and duty [Hegel]
3769 Brainwashing a feeling of guilt is easy [Mill]
2933 Why do you listen to your conscience? [Nietzsche]
4496 'Conscience' values intention, not consequence [Nietzsche]
11050 Supervenience contradicts antinaturalism [Hanna]
7259 Morality emerges from facts, not a priori [Ross]
5913 Ethics concerns bright people's intuitions [Ross]
5205 How to choose between intuitions? [Ayer]
6971 Intuitions of good are just approval feelings [Ayer]
2705 Intuitionism can't justify local morality [Hare]
2712 Which intuitions must intuitionists cultivate? [Hare]
4128 Intuitionism is dead and buried [Williams,B]
20286 An inner voice goes against rationality [Singer]
8051 'Intuition' just conceals bad argument [MacIntyre]
2864 Intuition may just be prejudice in disguise [Blackburn]
7260 Why should we care about intuited moral facts? [Dancy,J]
7261 Is a desire needed to motivate intuitions? [Dancy,J]
7262 Judging x wrong is a reason not to do it [Dancy,J]
7265 Moral facts are reasons, not perceptions [Dancy,J]
6177 Intuitions are very unevenly distributed [Rowlands]

d. Biological ethics

6217 Natural law is built into the human mind [Cumberland]
6924 Plotinus was ashamed to have a body [Feuerbach]
18297 Man created sustaining meanings [Nietzsche]
1568 Plato's idealism devalued ordinary life [Nietzsche]
7147 Values are innate and inherited [Nietzsche]
7190 Our values are relics of earlier eras [Nietzsche]
22187 Aggression is successful in evolution [Wilson,EO]

e. Human nature

7362 Similar humans are forced apart by conventions [Confucius]
7991 Our lower nature produces hate and lust [Anon (Bhag)]
143 We are pulled between pleasure and excellence [Plato]
1763 A plucked cock fits Plato's definition of man [Diogenes of Sin.]
5858 Physical and mental prime ages differ [Aristotle]

5134 Function will explain human happiness [Aristotle]
31 A whole man has a function, like his organs [Aristotle]
5231 A natural appetite replenishes deficiency [Aristotle]
6559 Aristotle never said man is a rational animal [Aristotle]
20813 Contemplate and imitate the cosmos [Chrysippus]
5730 Bodies come first, and their uses second [Lucretius]
18464 Justice is people fulfilling their function [Porphyry]
5764 Wickedness destroys human nature [Boethius]
8019 Ethics studies human, not divine, nature [Spinoza]
17189 Man is a modification of God [Spinoza]
17207 Good gets closer to true human nature [Spinoza]
17229 Childhood would be a defect if it was rare [Spinoza]
7667 Men have two sides, social and violent [Diderot]
21796 Man can raise himself to God [Hegel]
21379 Morality rests on egoism, malice, compassion [Schopenhauer]
21483 Man is a dreadful wild animal [Schopenhauer]
5276 Human nature coincides with its productions [Marx/Engels]
5281 Consciousness is a social product [Marx/Engels]
22086 Passion, not reason, dominates humans [Kierkegaard]
5298 Human essence is found in social relations [Marx]
20128 Each person is of a fixed type [Nietzsche]
7517 An infant could be trained into any specialism [Watson,JB]
20756 Man has a history, instead of a nature [Ortega y Gasset]
7074 Man is a useless passion [Sartre]
6687 Man is the desire to be God [Sartre]
3843 There is no human nature [Sartre]
5490 Extreme politics dislikes 'human nature' [Ellis]
5313 Human decisions reveal a 'human nature' [Wilson,EO]
4366 Aristotle's naturalism is too normative for us [Williams,B]
4132 'Person' is too vague for a moral basis [Williams,B]
8048 Solitary 'man' is not a functional concept [MacIntyre]
20162 Most accounts of human evil are wrong [Kekes]
5452 'Essentialism' says there is a human nature [Mautner]
7505 Fixed human nature does not entail evil [Pinker]
6586 Cynics are disappointed moralists [Fogelin]
20655 Hunter-gathering is 99.5% of our history [Watson]

f. Übermensch

4115 Plato found rational morality needs authority [Williams,B]
14810 'Good' was originally appropriate reward [Nietzsche]
20141 Higher people see and hear more [Nietzsche]
18293 The noble man wants new virtues [Nietzsche]
8041 The Superman is just a monstrous oddity [MacIntyre]
20135 The higher type matters, not the Superman [Nietzsche]
2883 Noble men determine their own values [Nietzsche]
4408 'Good' was conceived by aristocrats [Nietzsche]
20136 Great men extend their will across life [Nietzsche]
20358 The highest man controls maximum powers [Nietzsche]
20369 Higher men inspire higher natures [Nietzsche]
20138 Christianity opposes the higher instincts [Nietzsche]

g. Will to power

122 Morality is a conspiracy of the weak [Plato]
5 Might is right [Plato]
20956 Primal being is really just willing [Schelling]
20353 Drives, not people, have will to power [Nietzsche]
20129 All animals seek to express their power [Nietzsche]
4506 A will to power tries to make morals dominant [Nietzsche]
4514 The weak pull down the strong with morality [Nietzsche]

h. Expressivism

2360 Good and evil are just objects of love/hate [Hobbes]
6234 Reason tends to endorse our feelings [Shaftesbury]
6196 Feeling and sensations can't produce morality [Kant]
21409 Moral principles do not involve feelings [Kant]
20237 Moral feeling and moral concepts are different [Nietzsche]
20238 Morality as feeling is obeying ancestors [Nietzsche]
21741 Stating duties expresses approval [Russell]
5206 Morality just expresses a response [Ayer]
6969 Approving old murders allows imitation [Ayer]
6970 Moral judgements are links in behaviour [Ayer]
2706 Emotivists don't grasp non-factual reasoning [Hare]
8035 Emotivists can't explain the type of approval [MacIntyre]
8037 Feeling is in sentence-use, not meaning [MacIntyre]
8040 Emotivism can't explain logical terms [MacIntyre]
8042 Nowadays most people are emotivists [MacIntyre]
2853 Emotivism has motivation built into it [Brink]
2848 Moral view and attitude are not the same thing [Brink]
2850 One can recognise morality without feelings [Brink]

2851 Emotivism can't handle conditional judgements [Brink]
2852 Emotivism can't cope with moral truth or error [Brink]
2849 Emotivism gives moral terms individual meaning [Brink]
7333 Disapproval is an addition to moral ideas [Miller,A]
4375 Emotion is a type of evaluation [Achtenberg]

i. Prescriptivism

5168 We approve of classes of actions [Ayer]
2855 Prescription and description may differ a lot [Hare]
4125 Acquire and then aim at everyone's preferences [Hare]
4126 Abandon our own ideals for the many? [Williams,B]
4127 Must I support the evil preferences of others? [Williams,B]
2703 Prescriptivism goes beyond truth conditions [Hare]
2704 Descriptive ethics leads to relativism [Hare]
2707 Contradictory prescriptions are irrational [Hare]
2708 'Ought' implies consistent principles [Hare]
2709 Prescriptions are universal imperatives [Hare]
2711 Moral judgement necessarily contain motivation [Hare]
4134 "I don't like staying at good hotels" [Williams,B]
2865 One can accept a judgement but not obey it [Blackburn]
2854 Prescriptivism says 'ought' commits to action [Hooker,B]

i. Ethics by convention

6017 Nomos is king [Pindar]
6016 Is nature improved or harmed by convention [Protagoras]
536 Convention in public and nature in private [Antiphon]
1557 Follow convention in public, nature in private [Antiphon]
5070 For Socrates convention is natural [Taylor,R]
1563 Betrayal, sacrilege & murder can be right [Anon (Diss)]
2173 Plato moved ethics from society to the soul [Williams,B]
5071 Cynics preferred nature to convention [Taylor,R]
3024 Cyrenaics favour convention, not law [Aristippus young]
5855 Morality does not depend on community [Aristotle]
5075 Aristotle's virtue is convention or intellect [Taylor,R]
21 Moral variety implies convention not nature [Aristotle]
2807 Perhaps slavery is convention not nature [Aristotle]
3045 Justice is natural, not a definition [Chrysippus]
13325 Convention says imitate other people [Seneca]
1477 Bravery is conventional, not natural [Plutarch]
7410 Judging our self-preservation means relativism [Hobbes]
2368 Only law makes our actions sinful [Hobbes]
6680 A river can't mark the limits of justice [Pascal]
19956 Goodness is political, and is love of the laws [Montesquieu]
9750 We must value what others value [Kant]
21998 Bourgeois iinterests create morality [Marx/Engels]
2875 Love is beyond good and evil [Nietzsche]
15672 Morality validity is social involvement [Habermas]
8002 Outside a social order, or outside all order? [MacIntyre]
20174 Relative: cultural and personal, not humanity [Kekes]

k. Ethics from nature

20841 Live by nature, and by virtue [Zeno of Citium]
1774 Live by nature means live rationally [Zeno of Citium]
20774 Nature must guide action and virtue [Chrysippus]
6000 Select things by reason and nature [Diogenes of Babylon]
3066 Nothing is evil which is according to nature [Aurelius]
2868 Nature is too indifferent for us to live by it [Nietzsche]

4409 Aristocrats don't worry about "egoism" [Nietzsche]
4517 A powerful ego and powerful love go together [Nietzsche]
4518 What kind of ego? They aren't all equal! [Nietzsche]
4519 The 'ego' is a non-existent fiction [Nietzsche]
18327 Altruism with egoism is just bad [Nietzsche]
9241 Self-love is essential for a good life [Frankfurt]
6704 Egoism can't guide the formation of desires [Graham]
9761 Self-concern widens out into the impersonal [Korsgaard]

2. Hedonism

central aim of life being individual pleasure
130 Happiness is sensual self-indulgence [Plato]
377 Is pure pleasure enough for the good life? [Plato]
378 A jellyfish can experience pure pleasure [Plato]
388 Surely a man isn't bad because he is in pain? [Plato]
71 The lowest vices involve animal senses [Aristotle]
5954 All human activity aims at pleasure [Metrodorus of Lamp.]
5967 People only need corn and water [Chrysippus]
4019 Good and evil are pleasure and pain [Locke]

3. Cyrenaic School

Greek school which made personal pleasure central
3018 People often prefer money to pleasure [Aristippus elder]
1751 Pleasure is desired and final, pain avoided [Aristippus elder]
3019 All pleasures are the same [Aristippus young]
3021 Physical pleasure is better than mental [Aristippus young]
3543 Aim at high pleasure, but it isn't happiness [Annas]

B. Contract Ethics

1. Contractarianism

morality as doing favours in order to receive them
440 Benefit is mutual, like two hands washing [Epicharmus]
1580 Protagoras sees morality as social harmony [Protagoras]
19946 Morality is a compromise, for justice [Plato]
2097 Morality is useless with good reputation [Plato]
3560 Justice is a contract for mutual benefit [Epicurus]
1845 Justice is contracts to avoid injury [Epicurus]
6828 If you suspect treachery, break the treaty [Mohammed]
6823 Good for evil makes friends of enemies [Mohammed]
2371 Contract is the mutual transfer of rights [Hobbes]
2372 The first actor in a contract deserves reward [Hobbes]
8015 A contract needs prior shared values [MacIntyre]
4852 Virtue and happiness are self-interest [Spinoza]
20991 People help us out of self-interest [Smith,A]
4416 Justice is agreement among equals [Nietzsche]
4418 Strong people don't need contracts [Nietzsche]
5317 Top actors believe their performance is real [Wilson,EO]
4123 Aim at agreement which excludes selfishness [Rawls]
20281 Posterity offers us nothing, in a contract [Singer]
21036 Not all deals are fair deals [Sandel]
21038 Is obligation from consent, or from benefit? [Sandel]
21039 There is making a deal, and keeping it [Sandel]
4273 The Moral Law is agreement rules [Scruton]

2. Golden Rule

treat others as you would like to be treated
7360 Don't do to others what you wouldn't like [Confucius]
7350 The Torah is the Golden Rule [Hillel the Elder]
5356 Treat as you would be treated [Jesus]
5337 Is our duty to love, or to avoid harm? [Hobbes]
12934 The Rule needs some further standard [Leibniz]
7844 The Golden Rule is the basis of morality [Voltaire]
19768 Do good for you, without harming others? [Rousseau]
3733 The 'golden rule' implies no duties [Kant]
20246 Must we too hate self-haters? [Nietzsche]
4560 The Golden Rule assumes acts will be requited [Nietzsche]
21030 The Golden Rule only concerns desires [Sandel]
2856 Universal prescriptivism supports golden rule [Hooker,B]

3. Promise Keeping

logic and authority of keeping promises
7 Promise-keeping is relative [Plato]
7127 Men are bad, so you can break promises [Machiavelli]
2374 In nature, contracts are quickly broken [Hobbes]
5906 Promises concern the past, not consequences [Ross]
18622 Promises create duties, not outcomes [Ross]
3838 A promise gives me a reason to act [Searle]
4252 Promises increase our reliability [Williams,B]

4. Value of Authority

someone who creates trust by enforcing contracts
8 Morality is imposed by the powerful [Plato]
6286 The merciful shall obtain mercy [Jesus]
2375 Authority prevents breaking of contracts [Hobbes]
8016 Hobbes can only accept authority through fear [MacIntyre]

5. Free Rider

one who achieves maximum success by breaking contracts
15 Penance isn't virtue [Plato]
2377 Deliberate contract-breakers can't be citizens [Hobbes]
2379 The reason that makes a contract will keep it [Hobbes]
4116 Contractarians have problems with the strong [Williams,B]
3896 All social morality has the free rider problem [Scruton]

6. Game Theory

analysis and maths of relationship strategies
6447 Game theory misses impersonal motivation [Nagel]

7. Prisoner's Dilemma

situations where being rational brings failure
2373 The first actor in a contract is vulnerable [Hobbes]

8. Contract Strategies

subtle ways of getting what you want from people
2 Return justice for injustice [Socrates]
2382 One who always does good is a doormat [Hobbes]
20721 Get ahead, by punctuality and justice [Franklin]
4360 To seem upright, be upright [Hare]

9. Contractualism

morality is being able to give good reasons
6032 Right actions have reasonable justifications [Sext.Emiricus]
15671 Will universal laws that can be agreed [Habermas]
20992 Morality concerns acceptance by others [Scanlon]
21005 A right is weak if the public rejects it [Sen]

C. Virtue Theory

1. Virtue Theory

overall issues of ethics based on virtue

a. Nature of virtue

467 Virtues involve intelligence, strength, luck [Ion]
1663 For Socrates 'areté' means moral virtue [Vlastos]
13785 'Arete' is free-flowing of the soul [Plato]
6015 Theoretical & practical wisdom are inseparable [Plato]
5848 All goods can be misused except virtue [Aristotle]
5853 The best virtues are the most useful to others [Aristotle]
5111 Moral virtue concerns bodily pleasure and pain [Aristotle]
34 Good is virtuous activity of soul [Aristotle]
5137 Virtue is not relative to individuals [Aristotle]
4342 A virtuous life can be marred, but not ruined [Hursthouse]
4382 There is no choice involved in feelings [Kosman]
54 Virtue depends on the way the agent acts [Aristotle]
58 Virtues are dispositions [Aristotle]
4373 In virtue, emotions track values [Achtenberg]
63 Virtue is a prudent relative disposition [Aristotle]
5214 Ignorance of facts may excuse [Aristotle]
5215 Six categories of particulars [Aristotle]
5216 Many types of ignorance may excuse [Aristotle]
55 Virtue is in the way an action is done [Aristotle]
107 Moral virtue is human, intellectual divine [Aristotle]
5876 Virtue is different from continence [Aristotle]
591 Excellence is a sort of completion [Aristotle]
2662 Static virtue is as good as active virtue [Zeno of Citium]
5966 All virtue is good, but not always praised [Chrysippus]
6895 Seek world-virtues, not state-virtues [Stoic school]
6012 Choose a virtue in which to excel [Panaetius]
5763 The good pursue virtue, and the bad desire [Boethius]
3925 Virtue is a useful or pleasant mental quality [Hume]
3736 Virtue allows law-creation & a kingdom of ends [Kant]
6194 Human worth is in dispositions, not actions [Kant]
6198 Virtue is the supreme good [Kant]
21411 Duties of virtue require ends [Kant]
21413 Virtue is strong maxims for duty [Kant]
21414 Virtues seeks universal ends [Kant]
4184 Virtue comes from natural sympathy [Schopenhauer]
4555 Error: happiness from virtue from free will [Nietzsche]
2169 Greeks gradually freed areté from elitism [Williams,B]
8058 Maybe virtues come before rules [MacIntyre]

23. Ethics

A. Egoism

1. Ethical Egoism

view that people should put themselves first
2166 A healthy mind behaves well even if invisible [Plato]
1636 Wickedness is an illness of the soul [Plato]
3025 Give top priority to yourself [Aristippus young]
5856 Self-interest is relative, nobility absolute [Aristotle]
88 Our own identity has supreme value [Aristotle]
91 Man should be his own best friend [Aristotle]
3031 Prefer good desires to attaining one's desire [Menedemus]
1769 Aim to eliminate desire, like the gods [Diog. Laertius]
4851 Reason demands self-love [Spinoza]
17220 Self-satisfaction is our highest aim [Spinoza]
6235 Public good requires self-interest [Shaftesbury]
3929 Moral actions must benefit the agent [Hume]
20248 We only focus on an ego created by others [Nietzsche]
2885 The noble soul has reverence for itself [Nietzsche]
3259 Reject impersonal morality to live well [Nietzsche]

12040 Virtue is understanding moral value [Annas]
20196 We need core agreed universal virtues [Zagzebski]
20200 There is a vice for every virtue [Zagzebski]
20201 Eight marks distinguish skills from virtues [Zagzebski]
20203 Virtue is excellence that brings success [Zagzebski]
20207 Moral virtues need some intelligence [Zagzebski]
4359 For child rearing, virtue is clearly best [Hursthouse]

b. Basis of virtue

5838 Fine things function well [Socrates]
2095 Things with function have a natural excellence [Plato]
33 Excellence is based on function [Aristotle]
5149 Virtues are intellectual or moral [Aristotle]
5156 Are acting well and virtue circular? [Aristotle]
5157 Excellence means good functioning [Aristotle]
5872 Excellence is good function [Aristotle]
625 Is the goodness of the cosmos in its order? [Aristotle]
14060 Prudence is the greatest good [Epicurus]
20855 Chrysippus says virtue can be lost [Chrysippus]
5970 Nothing in nature is blameworthy [Chrysippus]
21871 Successful striving is virtue [Spinoza]
17210 All virtue is founded on self-preservation [Spinoza]
17214 To act virtuously is to act rationally [Spinoza]
12515 Virtue is praiseworthy action [Locke]
6232 All creatures have a right state & natural end [Shaftesbury]
8097 Virtue is hard if we are scorned [Joubert]
14818 Morality moves from sheer force to virtue [Nietzsche]
21742 Originally virtue was just obedience [Russell]
5076 Virtue is perfection of function [Taylor, R]
20195 Derive virtues from seeking eudaimonia [Hursthouse]

c. Particularism

4369 Virtue needs particulars, not universals [Aristotle]
5158 Particulars overrule any moral rules [Aristotle]
5237 Blame involves particulars, not rules [Aristotle]
2935 No two actions are ever the same [Nietzsche]
20134 Moralities wildly over-generalise [Nietzsche]
9262 We don't prove morality; we see it directly [Prichard]
9256 We need an instance to see a duty [Prichard]
9257 Morality only seems graspable locally [Prichard]
5908 Circumstances show us obvious duties [Ross]
18671 Grounds for an attitude are concrete [Ewing]
21025 Particularism gives no guidance for the future [Nussbaum]
18664 Feminist particularism, rather than principles [Kymlicka]
20214 Virtue theory can have lots of rules [Zagzebski]
4336 Particular cases need flexibility in morality [Hursthouse]

d. Virtue theory critique

3548 Where do rules fit into mature virtue? [Annas]
1581 Greeks don't explain virtue very clearly [Descartes]
3544 Virtue may become a passive non-moral faculty [Kant]
5289 Groups and their values dominate together [Marx/Engels]
20103 Virtues are your tools, not your master [Nietzsche]
20198 Virtues are praised, but harm their owner [Nietzsche]
2881 Boring people advocate virtue [Nietzsche]
7165 The virtuous life is mutual nursing [Nietzsche]
7193 Virtue loses its charm if it is for everyone [Nietzsche]
20375 Virtues must be highly personal [Nietzsche]
9260 Virtues won't produce obligations [Prichard]
16956 Generosity is actions first, then persons [Dummett]
7097 Virtue is secondary to a role-figure [MacIntyre]
7101 Virtue theory needs an external standard [Inwagen]
4334 How can priority be shown among virtues? [Hursthouse]
7100 Virtue theory isn't universal, so fails [Statman]
7102 Promises are duties, irrespective of character [Statman]

2. Elements of Virtue Theory

component parts of the theory of virtues

a. Natural virtue

4367 Virtue is unnatural, unlike falling stones [Aristotle]
5223 We are partly responsible for our virtues [Aristotle]
4362 Natural virtue without brains can be harmful [Aristotle]
4361 Good animals have characteristic virtues [Hursthouse]

b. Living naturally

6013 Live according to our natural starting-points [Panaetius]
13318 Virtue isn't free; it needs hard work [Seneca]
13324 Life against nature is rowing upstream [Seneca]
3069 Life is more like wrestling than dancing [Aurelius]
4856 Rational life is natural life [Spinoza]

4493 How to be natural, if you are 'unnatural'? [Nietzsche]
4494 Humanity has never yet been 'natural' [Nietzsche]
4498 It is natural to hate enemies, not love them [Nietzsche]

c. Motivation for virtue

6324 Treat good and evil people as good [Lao Tzu]
345 Good men can never be harmed [Socrates]
120 Avoid wrong-doing for your own sake [Plato]
170 We should be slaves to excellence [Plato]
182 Beauty leads to virtue [Plato]
5944 Virtue is its own reward [Lawson-Tancred]
144 Virtue is rational and needs self-discipline [Plato]
4332 Virtue is reason and right feeling, in harmony [Plato]
248 A strong desire for virtue is unusual [Plato]
253 Self-love is the cause of crime [Plato]
263 All the virtues should be pursued [Plato]
5225 Fineness is the end of virtue [Aristotle]
56 Virtue is its own reward, and freely done [Aristotle]
93 Good people love life [Aristotle]
2841 Nature, habit and reason lead to virtue [Aristotle]
1841 Choose virtue for pleasure, not for itself [Epicurus]
497 Be virtuous from duty, not from fear [Democritus (attr)]
503 Virtue is not wanting to do wrong [Democritus (attr)]
518 A bad life is just a drawn-out death [Democritus (attr)]
2672 Virtue which aims at reward is a sham [Cicero]
6290 Become as little children to enter heaven [Jesus]
13559 Virtue is its own reward [Seneca]
18444 Civil virtues unite citizens in benevolence [Porphyry]
18445 Civil virtue controls human nature [Porphyry]
18446 Some virtues suppress passions [Porphyry]
20482 Aim for good temperament, not virtue [Montaigne]
2383 Virtues are a means to comfortable life [Hobbes]
7913 Virtue needs the support of vanity [Rochefoucauld]
4580 All virtues must be beneficial to someone [Hume]
1456 Virtue is human respect for fixed moral law [Kant]
21436 Manners make virtues fashionable [Kant]
3771 The ends aimed at give virtue its value [Mill]
14817 True 'good' is natural, easy and cheerful [Nietzsche]
4511 We shouldn't need reasons to remain decent [Nietzsche]
4512 The virtuous are self-interested nonentities [Nietzsche]
9251 One can be virtuous through a whim [Camus]
4112 Should we want certain desires? [Williams, B]
3541 Ancients prefer ethical attractions to rules [Annas]
4349 Virtue may have unclear reasons to act [Hursthouse]
4352 Virtue is moral motivation or duty [Hursthouse]
4353 Children can be good without rules [Hursthouse]

d. Teaching virtue

205 If virtue isn't knowledge it isn't teachable [Plato]
4323 Is virtue an intellectual teachable unity? [PG]
8003 Virtue is teachable, but lacks teachers [Socrates]
21385 Virtue is permanent, and like wealth [Antisthenes (I)]
1913 Is virtue taught, practised, natural, or what? [Plato]
1921 If virtue is knowledge, it can be taught [Plato]
1927 Virtue is inspiration, not nature or teaching [Plato]
188 Virtue cannot be taught [Plato]
189 Punishment implies that virtue can be taught [Plato]
204 Intellectualism implies virtue is teachable [Plato]
235 Law aims at creating virtue [Plato]
43 Virtue is a potential, attained by habit [Aristotle]
44 Habitual good deeds lead to virtue [Aristotle]
5152 Quality of activity leads to disposition [Aristotle]
4378 Practice teaches us about virtue [Burnyeat]
51 Education is training correct feelings [Aristotle]
6793 We can enter the circle of virtue & good acts [Aristotle]
57 Virtue comes from repeated good acts [Aristotle]
2690 To learn virtue mix with the good [Aristotle]
2846 Music can stimulate virtue [Aristotle]
499 Repentance is salvation in life [Democritus (attr)]
524 Virtue comes more from practice than nature [Democritus (attr)]
8009 Aquinas wants to transform our desires [Aquinas]
21419 Habitual virtual stunts maxim choice [Kant]
7095 Morally educate by example, not principle [Statman]

e. Character

433 For man character is destiny [Heraclitus]
541 Virtue comes more from habit than character [Critias]
540 Regular activity forms character [Antiphon]
126 Adjust your own character [Socrates]

118 Sooner be a victim than a criminal [Plato]
5222 Good characters know what is fine [Aristotle]
4394 Activity develops character [Aristotle]
5239 Justice is a disposition of character [Aristotle]
4386 There are six types of moral character [Aristotle]
5250 Avoid vice, akrasia and brutishness [Aristotle]
4379 It is hard to change character by argument [Aristotle]
5874 Character concerns our non-rational part [Aristotle]
5875 Éthos (character) is from ethos (habit) [Aristotle]
14517 We always value our own characters [Epicurus]
7896 The foolish gradually fill with evil [Anon (Dham)]
7897 The wise gradually fill with good [Anon (Dham)]
13554 True greatness is imperturbable [Seneca]
13305 Good character requires surveying the past [Seneca]
20480 Goodness late in life is useless [Montaigne]
20957 We embrace our character without choosing it [Schelling]
21484 One action can reveal a character [Schopenhauer]
7191 What does not kill us makes us stronger [Nietzsche]
20764 Our desires create an image of man [Sartre]
8070 Let's put character failings before wrong acts [Anscombe]
5123 Character does not exist [Harman]
5124 Two timid acts, two explanations, not one [Harman]
5125 Maybe actions are virtuous, not character [Harman]
8043 Character is the mask of morality [MacIntyre]

f. The Mean

7359 Excess and deficiency are both wrong [Confucius]
20917 Moderation and proportion give contentment [Democritus]
305 Things in between ills are better than either [Plato]
281 The mean achieves the best in the arts [Plato]
3545 Vices oppose other vices, not virtues [Aristotle]
47 Virtues are preserved by the mean [Aristotle]
4406 The mean makes emotions harmless [Nietzsche]
60 The mean is relative to the individual [Aristotle]
61 Technai need the mean, as well as virtue [Aristotle]
4388 Moderation and the mean are different [Urmson]
4387 It is usually appropriate to have no feelings [Urmson]
62 Virtue requires correct feeling in every way [Aristotle]
5159 The mean is good, extremes bad [Aristotle]
5160 Feelings also have a mean [Aristotle]
65 Temptation most strongly opposes the mean [Aristotle]
5161 Making anger appropriate is hard [Aristotle]
5235 Indignation should be rational and appropriate [Aristotle]
5238 Truth is a mean between extremes [Aristotle]
2829 The law is the mean [Aristotle]
21395 Zeno wrote 'That Which is Appropriate' [Zeno of Citium]
3049 Be indifferent to intermediate things [Ariston]
20848 Appropriate actions can be defended [Stoic school]
7453 Medicine returns the body to the mean [Galen]
21417 Extremes of a mean have different maxims [Kant]
21420 The mean makes virtue fading vice [Kant]
20372 The herd aims for what is average [Nietzsche]

g. Desires

6322 Too many desires is the worst crime [Lao Tzu]

h. Right feelings

5217 We ought to have some feelings [Aristotle]
5236 One ought to be angry sometimes [Aristotle]
6287 Lusting after a woman is adultery [Jesus]
8061 Emotivism means you can't judge emotions [MacIntyre]
6701 Rescue operations need spontaneous benevolence [Graham]
3221 Morality involves desires about desires [Rey]
4346 Sympathy doesn't guarantee right action [Hursthouse]

i. Absolute virtues

64 Adultery is just wrong, without a mean [Aristotle]
519 One must avoid even speaking of evil deeds [Democritus (attr)]
19458 Egoism is the only evil, love the only good [Feuerbach]
4339 Virtue allows more than one right action [Hursthouse]

j. Unity of virtue

4111 The only virtue is good judgement [Socrates]
1916 The many virtues must have something in common [Plato]
1918 Knowing a part of virtue involves the whole [Plato]
2155 Virtue requires mental unity and harmony [Plato]
277 The main virtues have one common element [Plato]
4117 Nowadays an isolated virtue seems possible [Williams, B]
13561 Virtue is invariably moderate [Seneca]
5759 Aims become good when they are united [Boethius]

17221 All the virtues depend on self-knowledge [Spinoza]
21418 Unified virtue has many objects [Kant]
20213 Phronesis coordinates the virtues [Zagzebski]
4354 A vicious person cannot have virtues [Hursthouse]
4356 Virtue and vice in one person is puzzling [Hursthouse]
4364 A strong virtue may diminish the others [Hursthouse]

3. Virtues

individual qualities of character held to be fine and valuable

a. Virtues

20239 For Greeks envy is good, hope bad [Hesiod]
7363 There are five supreme virtues [Confucius]
3015 Foresight is man's essential virtue [Chilo]
7808 Justice and friendship are key values [Socrates]
2126 There are four cardinal virtues [Plato]
5251 The gods are superior to our virtues [Aristotle]
12276 Essential virtues are superior [Aristotle]
12277 Excess is OK in the best virtues [Aristotle]
5964 There are four main inseparable virtues [Zeno of Citium]
8765 All is vanity, saith the Preacher [Anon (Ecc)]
6004 Virtues are theoretical or non-theoretical [Hecato]
22241 Getting good and avoiding bad are easy [Philodemus]
6285 The meek shall inherit the earth [Jesus]
13562 At least recognise your slaves! [Seneca]
13556 Every night I criticise myself [Seneca]
5948 We should be social, loyal, temperate & honest [Plutarch]
7903 There are six Buddhist perfections [Nagarjuna]
6030 Virtues of soul are pleasure, success, rectitude [Galen]
18447 Four main types of virtue [Porphyry]
6826 Humble devotion, charity and chastity are best [Mohammed]
4016 The main virtue is strength of will [Descartes]
21481 Buddhists wisely start with the cardinal vices [Schopenhauer]
21482 The Chinese have five cardinal virtues [Schopenhauer]
14809 Gratitude is always a first duty [Nietzsche]
20240 For the Jews wrath was holy and awesome [Nietzsche]
20244 Christian virtues are irrational passions [Nietzsche]
20272 Honesty is a new young virtue [Nietzsche]
20274 Be honest, brave, generous, polite [Nietzsche]
18291 Virtues compete with each other [Nietzsche]
20382 Courage, insight, sympathy, solitude [Nietzsche]
7151 Courage, compassion, insight and solitude [Nietzsche]
4510 Introduce new virtues disguised as old ones! [Nietzsche]
4515 The popular virtues are slave virtues [Nietzsche]
4516 Most virtues stifle human creativity [Nietzsche]
7676 The greatest virtue is sincerity [Berlin]
4274 Modern virtues are expanded ancient ones [Scruton]
20209 The honesty virtue needs care with truth [Zagzebski]

b. Temperance

131 Absence of desire cannot be happiness [Plato]
140 Self-indulgence prevents true friendship [Plato]
254 Excessive laughter and tears are bad [Plato]
2813 Moderation doesn't guarantee happiness [Aristotle]
13552 Anger is the most extreme vice [Seneca]
13553 Anger is a vice even of good people [Seneca]
13308 Don't let your own temper conquer you! [Seneca]
13312 Excess curiosity is a form of intemperance [Seneca]

c. Justice

5244 Pythagorean justice was equal treatment [Pythagoras]
441 Evil is justified against an evil [Epicharmus]
346 One should not do wrong in return for a wrong [Socrates]
119 Criminals should want to be punished [Plato]
129 People approve of morality through fear [Plato]
2092 Do good to friends and harm to enemies [Plato]
266 Injustice is control of the soul by appetites [Plato]
5151 Justice is our dealings with others [Aristotle]
4389 What is the mean for justice? [Urmson]
5240 Justice is law and fair-dealing [Aristotle]
5242 Justice is what creates social happiness [Aristotle]
5261 Between friends there is no need for justice [Aristotle]
14513 Justice is a pledge of mutual protection [Epicurus]
500 Wrong-doing is worse than being wronged [Democritus (attr)]
6001 Distribute according to desert [Diogenes of Babylon]
6288 Don't resist evil, but turn the other cheek [Jesus]
6822 Justified vengeance is not wrong [Mohammed]
2376 Justice keeps contracts, injustice breaks them [Hobbes]
3922 Justice exists to support society [Hume]

14816 Justice originates among equal powers [Nietzsche]
4559 Freedom and justice are means to power [Nietzsche]
8001 'Dikaosune' is justice, fairness & integrity [MacIntyre]
4286 Just people renounce self-interest for law [Scruton]

d. Courage

293 Bravery is not just lack of fear [Plato]
5224 Courage is enduring honourable death [Aristotle]
5226 True courage is an appropriate response [Aristotle]
7283 Great courage is not violent [Chuang Tzu]
6014 Civic courage is finer than military courage [Panaetius]
17225 Fleeing can be as brave as fighting [Spinoza]
6241 Courage without virtue is madness [Hutcheson]
20257 Cool and hot courage are quite different [Nietzsche]
15606 The military think survival strengthens you [Nietzsche]
3848 Cowards are responsible for their cowardice [Sartre]
15640 Courage is every virtue at its testing point [Lewis, CS]
20197 Bravery is a virtue, in an evil person [Zagzebski]

e. Honour

7811 Out-of-date heroes die terrible deaths [Sophocles]
8235 Can dishonour laugh at greater dishonour? [Mencius (Mengzi)]
24 Honour depends on the audience [Aristotle]
4119 Honour becomes dependent on approval [Aristotle]
5233 Honour is the greatest external good [Aristotle]
20844 Honour: just, brave, orderly, knowing [Stoic school]
4557 Alexander etc actually despised honour! [Nietzsche]
4021 Risking one's life is the essence of honour [Taylor, C]
7809 Shame is the worst, and revenge a duty [Grayling]

f. Compassion

5857 Pity in the old is self-interested [Aristotle]
5890 We should relieve suffering, not share it [Cicero]
4022 Be sympathetic, but not pitying [Epictetus]
17218 The life of reasons should avoid pity [Spinoza]
17219 Callous feeling and reason is inhuman [Spinoza]
4857 Pity is both painful and unnecessary [Spinoza]
17223 Pity isn't virtue, but shows good motives [Spinoza]
19766 Crying shows our natural compassion [Rousseau]
7674 Generosity and pity falsely imply superiority [Kant]
20112 Arousing pity is the power to hurt [Nietzsche]
14821 Most people rightly rate pity low [Nietzsche]
4275 Joy and pity are complementary, not separable [Scruton]
2879 In Rome pity was neither good nor bad [Nietzsche]
4407 Plato and Kant place a low value on pity [Nietzsche]
18328 Invalids are parasites [Nietzsche]
4425 It is noble to overcome pity [Nietzsche]
21026 Compassion is unreliable, because biased [Nussbaum]
4283 Sympathy can be opposed to morality [Scruton]

g. Contemplation

18231 The ordered cosmos is worth living for [Anaxagoras]
18229 Only contemplation is intrinsically desirable [Aristotle]
104 Contemplation, when possible, is our best good [Aristotle]
5272 The intellectual life is divine [Aristotle]
105 We should aim at the highest god-like virtues [Aristotle]
18232 Only contemplation is worth of the gods [Aristotle]
110 Contemplation is essential for happiness [Aristotle]
111 Contemplation increases happiness [Aristotle]
621 Contemplation is supreme pleasure and virtue [Aristotle]
4012 The Stoics did not value contemplation [Stoic school]
7071 Rational self-contemplation is pointless [Jacobi]
18233 Contemplation is a non-process activity [Korsgaard]
18226 Contemplation is just understanding [Korsgaard]

h. Respect

21029 Kantian respect is impersonal and objective [Kant]
21425 Respect and love are quite distinct [Kant]
21430 Disrespect is using a person as a mere means [Kant]
21428 Respect is not exalting oneself [Kant]
21427 Respect attends to human dignity [Kant]
21426 Love gets closer, respect keeps a distance [Kant]
21434 Respect the humanity of criminals [Kant]
20259 Teach youth to respect disagreement [Nietzsche]
1460 'Holy' experience is no different from others [Taylor, AE]
21517 We need creativity, reverence, self-respect [Russell]
5917 We lose our rights if we don't respect rights [Ross]
4005 To respect people you must feel for them [Taylor, C]
3236 Respect is needed as well as opportunity [Williams, B]
7589 Are your interests mine, or reasons for me? [Scruton]

20547 We should respect irrational lives [Swift]

4. External Goods

role in a good human life of facts outside the mind

a. External goods

5138 Fine deeds need external resources [Aristotle]
38 Ill fortune can destroy happiness [Aristotle]
1665 Good men are NOT happy under torture [Aristotle]
5871 The goods within the soul are best [Aristotle]
1829 Wise men are happy even if tortured [Epicurus]
5073 Do not desire external goods [Taylor, R]
20862 Music and letters are virtuous conditions [Stoic school]
13549 Nothing bad can happen to a good man [Seneca]

b. Health

4320 First health, then good looks, then wealth [Plato]

c. Wealth

341 Virtue creates wealth, not the other way round [Socrates]
13551 Wealth is a burden to virtue [Democritus]
351 Wealth, which satisfies the body, causes war [Plato]
242 Extremes of wealth corrupt character [Plato]
256 Great wealth makes virtue impossible [Plato]
5859 The rich are mindlessly happy [Aristotle]
108 The virtue of generosity requires money [Aristotle]
1539 Desire for great wealth leads to misery [Democritus (attr)]
526 Small appetite makes poverty equal wealth [Democritus (attr)]
5894 All men except philosophers fear poverty [Cicero]
6293 Heaven is mostly closed to the rich [Jesus]
13563 Earrings worth more than a house? [Seneca]
13564 Wealth makes more virtue possible [Seneca]
13565 Wealth doesn't seem to increase goodness [Seneca]
17228 Rational people need very little money [Spinoza]
18287 People now find wealth wearisome [Nietzsche]
20692 Money brings happiness, up to a point [Harari]

d. Friendship

294 Only good people can be friends [Plato]
156 Bad men are incapable of friendship [Plato]
3027 Wise men need no friends [Aristippus young]
2686 Aristotle doesn't crudely divide friendship [Cooper, JM]
2687 Some virtue is needed for finest friendships [Cooper, JM]
85 Only good men can be true friends [Aristotle]
2808 Master and slave are natural friends [Aristotle]
12275 We value friendship for itself alone [Aristotle]
1843 Friendship is crucial for happiness [Epicurus]
511 Intelligent friends are the best [Democritus (attr)]
7895 Find superior friends, or travel alone [Anon (Dham)]
7916 True friendship is even rarer than true love [Rochefoucauld]
21093 Community spirit, as well as friendship [Hume]
14841 Some are more befriended than friendly [Nietzsche]
14843 Women can befriend unattractive men [Nietzsche]
18295 Only fighters have friends [Nietzsche]
7094 Good friends are friendly to no purpose [Statman]
2685 'Philia' is much wider term than 'friendship' [Cooper, JM]

D. Deontological Ethics

1. Deontology

moral theories centring on the idea of duty

5252 Enkratiea abides by calculations [Aristotle]
3549 Rules are useless for good and bad people [Ariston]
19407 Get good education, not moral precepts [Leibniz]
6257 Rules need an end and feelings [Hutcheson]
7105 If maxims are deeper, they are virtues [Kant]
7625 Why is rationality itself good? [Putnam]
4024 Freedom and good are interdefinable [Taylor, C]
3710 The only purely good thing is a good will [Kant]
3715 Morality is rational law-following not results [Kant]
3737 Good will cannot produce contradictions [Kant]
20715 All moral actions are done from duty [Kant]
7185 Natural imperative, not categorical [Nietzsche]
2915 We need individual categorical imperatives [Nietzsche]
8065 We must now jettison 'right' and 'ought' [Anscombe]
8069 Christianity introduced ethics as law [Anscombe]
5077 Isn't an obligation 'to' something? [Taylor, R]
4113 'Deon' meant 'what one must do' [Williams, B]
3261 Rationally required or rationally acceptable? [Nagel]
20276 Make rules complex, or rank them [Singer]
3784 Don't do this, whatever its consequences [Glover]

3550 Principles for life; rules just for actions [Annas]
4327 Consequences can make a rule apparent [Hursthouse]
4335 Codifiable morals have rules, not wisdom [Hursthouse]

2. Duty

nature of duty and its underpinnings

498 Duty is a great strength in adversity [Democritus (attr)]
5072 Obligations are fixed by social role [Taylor,R]
22119 'Ought' does not imply 'can' [Augustine]
3918 Morality theory should show duties [Hume]
5295 Kant wanted good will, but not results [Kant]
6695 Kant must endorse very unattractive people [Kant]
8028 Kantian duty seems to imply conformism [MacIntyre]
3714 Duties are judged by principles, not results [Kant]
3718 Tell the truth for duty, not for consequences [Kant]
3724 Intrinsically necessary acts are categorical [Kant]
3723 A holy will has no duties, but IS moral law [Kant]
3735 Moral duties are self-made but universal [Kant]
21060 Ought implies can [Kant]
3768 Only orthodox morality feels obligatory [Mill]
19230 Pursue in life what you can achieve [Peirce]
20267 If duty is a burden it can't be a habit [Nietzsche]
4415 Obligation originated in the market [Nietzsche]
20725 Duty of calling haunts us like religion [Weber]
9259 Duties can be personal as well as social [Prichard]
9255 Perceiving goodness creates duty [Prichard]
5900 Don't do duties from a sense of duty [Ross]
5909 Be faithful, grateful, just, kind, improved [Ross]
5942 We like love, but admire duty [Ross]
7664 Greeks have no notion of obligation or duty [Berlin]
5065 An ethics of duty needs religion [Taylor,R]
5066 Excellence is replaced by duty to God [Taylor,R]
3813 'Ought' implies a reason for action [Searle]
4110 Duty looks back in time for its reasons [Williams,B]
4248 Morality gives permission as well as duty [Williams,B]
4249 Ought implies can [Williams,B]
4250 'Duty to myself' is nonsense [Williams,B]
2172 Duty is largely an unknown concept to Greeks [Williams,B]
3258 You only have duty if you can think about it [Nagel]
8023 Duty depends on social relations [MacIntyre]
3551 Virtue theory explains duty through character [Annas]
22262 Kant's moral law can have no foundation [Sandel]
3886 Membership is the greatest source of duty [Scruton]
4290 If an act requires callousness, it is wrong [Scruton]
7093 Behaviour can still be bad, though dutiful [Statman]
7104 Modern moralists understand perfect duties [Statman]
20886 Does only agreement create duties? [LaFollette]

3. Universalisability

seeing rules for action as universal guidelines

6031 The essence of propriety is consistency [Cicero]
4853 Reason is self-interest and altruism [Spinoza]
4858 Rational people are altruistic [Spinoza]
8026 Any precept can be universalised [MacIntyre]
6185 Lending needs universal laws in support [Kant]
6187 Universal will turns self-love to altruism [Kant]
8029 Individual morality can't be universal [Hegel]
20763 Involved freedom seeks freedom for all [Sartre]
2710 Moral judgements always invoke principles [Hare]
21051 Does your opinion sound right if made law? [Rawls]
4121 Why am I both legislator and citizen? [Williams,B]
4122 Impartiality kills all self-interest [Williams,B]
3282 Put yourself in other people's shoes [Nagel]
3294 Be an instrument of what is eternally best [Nagel]
3254 Moral is judgements made objectively [Nagel]
3264 Aim to be objective without total detachment [Nagel]
6446 Ethics is impersonal but not inhuman [Nagel]
4285 Drop self-interest and moral agreement arrives [Scruton]
15674 Universal advice isn't obligatory [Finlayson]

4. Categorical Imperative

seeing a universal rule as an inescapable duty

4413 The categorical imperative is cruel [Nietzsche]
15673 Don't make an exception of oneself [Kant]
8068 How to describe the action of the maxim? [Anscombe]
8025 The Imperative will not suggest good maxims [MacIntyre]
8027 A maxim can be highly personalised [MacIntyre]
3762 Immoral rules are not irrational [Mill]

3716 Follow maxims which can be universalised [Kant]
3719 Universal lying destroys promising [Kant]
3727 Follow ideal universal laws of nature [Kant]
3728 Immoral acts are contradictions of principle [Kant]
22008 Treat people as ends, not as means [Kant]
22009 Morality makes laws for a Kingdom of Ends [Kant]
22051 A categorical imperative lacks cultural roots [Hegel]
2934 Why is my judgement a universal law? [Nietzsche]
2859 The categorical imperative exalts obedience [Nietzsche]
4507 The categorical imperative needs a backing [Nietzsche]
21745 Act to produce harmonious desires [Russell]
5914 Acts can be described in innumerable ways [Ross]
6449 Kant's theory leads to utilitarianism [Hare]
4004 Consistency needs fixed descriptions of acts [Taylor,C]
6477 If I can universalise it, so can everyone else [Nagel]
6693 'What if everybody cheats?' misses the point [Graham]
3895 Strangers negotiate by universalising [Scruton]

5. Persons as Ends

seeing rational beings as an ultimate value in actions

22050 Maxims are chosen. not imposed [Kant]
6694 Treat humanity as an end, not a means [Kant]
3731 For rational beings their existence is an end [Kant]
6201 Rational beings are ends, not just means [Kant]
21031 Man is not a thing to be owned and sold [Sandel]

6. Motivation for Duty

reasons why someone should want to do their duty

3919 Reason doesn't affect feeling or action [Hume]
5605 Reasons are causes that should be followed [Kant]
5632 Moral laws involve divine threats [Kant]
4345 Kantians can lack sympathy and still be nice [Kant]
4251 Morality as an intrinsic priority is empty [Williams,B]
16004 Kant's self-imposed laws are too feeble [Kierkegaard]
3711 Only a good will makes us worthy of happiness [Kant]
3713 The role of reason is to produce a good will [Kant]
3729 Rational beings don't even want desires [Kant]
4344 Good actions for fun are not moral [Kant]
6186 A holy will has to follow the moral law [Kant]
6195 Why should a law motivate the will? [Kant]
21062 The moral law itself is the will's motivation [Kant]
2180 Autonomous rational beings ignore others [Williams,B]
2179 Impersonal morality ignores other people [Williams,B]
3255 Objective motives are better than subjective [Nagel]
3552 Duty doesn't explain outstanding moral deeds [Annas]

E. Utilitarianism

1. Utilitarianism

belief that good is maximising happiness

6218 Individual and group happiness are connected [Cumberland]
6220 Happiness for all is happiness for each [Cumberland]
6245 Aim at greatest happiness of greatest number [Hutcheson]
3928 Virtue aims to calculate happiness increase [Hume]
7214 Maximise permanent progressive interests [Mill]
7202 Good destroying evil is an absurd task [Nietzsche]
5935 Mill admits other goods than pleasure [Ross]
3764 Promoting pleasure is right, pain wrong [Mill]
3776 Everyone has an equal right to happiness [Mill]
4129 All individuals are obviously equal [Sidgwick]
14811 In Homer only contemptible people are bad [Nietzsche]
9258 Is hurting ourselves morally wrong? [Prichard]
5907 We need duties as well as altruism [Ross]
5912 Repay debts before giving to charity [Ross]
4010 Later utilitarianism rejects paternalism [Taylor,C]
3279 Utilitarianism is individual, not social [Rawls]
8038 Moore is a utilitarian [MacIntyre]
3782 Happiness is not satisfaction of desires [Glover]
9762 Experiences matter, not their subjects [Parfit]
18624 Utilitarianism is not a decision-procedure [Kymlicka]
18626 Equality implies maximum utility [Kymlicka]
18627 Maximum utility implies equality [Kymlicka]
3542 Don't maximise good; do necessary good [Annas]
4280 Utilitarianism blurs people and animals [Scruton]
4282 Morality sets the limits to calculation [Scruton]
4281 We must sometimes pass final judgements [Scruton]
4287 Utility is the guide when morality is silent [Scruton]
4328 Preferences are value-free and empirical [Hursthouse]

4338 Do utilitarians oversimplify hard cases? [Hursthouse]
4343 Utility and duty can't assess lying [Hursthouse]
20583 Desire fulfilment also needs measuring [Tuckness/Wolf]
20584 Judging as good must precede desires [Tuckness/Wolf]

2. Ideal of Pleasure

ideal life for believers in pleasure

3554 Why use morality to achieve feeling good? [Annas]
3781 Value pleasure and pain by their force [Bentham]
3763 It is impossible to prove pleasure good [Mill]
3765 Only pleasure and no pain are desirable [Mill]
3766 Better Socrates dissatisfied than a happy fool [Mill]
5398 What has value is prior to what is useful [Russell]
20585 Should you hook up to an experience machine? [Nozick]
20883 Modern utilitarians value more than pleasure [Hooker,B]

3. Motivation for Altruism

reasons why other people's feelings matter

3923 People don't want to inflict pointless pain [Hume]
3924 Private affection motivates better than public [Hume]
3770 The general good is collective self-interest [Mill]
2884 Utilitarianism is slave morality [Nietzsche]
4501 Utilitarianism still retains faith in morality [Nietzsche]
4124 Utilitarians have no close attachments [Williams,B]
3262 Utilitarianism is too demanding [Nagel]

4. Unfairness

problem of unequal distribution of pleasure or pain

6570 Imagine millions happy at the expense of one [James]
3877 Some murders seem to increase happiness [PG]

5. Rule Utilitarianism

doing what generally leads to increased happiness

6697 General rules override local rules [Mill]
3787 Only act-utilitarianism makes sense [Glover]
20884 The rules can black the 'best' action [Hooker,B]

6. Ideal Utilitarianism

maximising ideal goods for everyone

6673 Utilitarianism seeks ideals, not just pleasure [Rashdall]

F. Existentialism

1. Existentialism

key to life is freedom and self-creation

7585 Socrates emphasises the existing individual [Socrates]
21758 Human identity shifts with history [Hegel]
7579 Unlike metaphysics, individuals need ethics [Kierkegaard]
7581 Speculation erases the individual [Kierkegaard]
20111 Live more naturally, and enjoy it [Nietzsche]
20104 Nietzsche wanted a thought-provoking life [Safranski]
2880 Mankind still has huge possibilities [Nietzsche]
7164 Ignoring 'ends' is wonderfully liberating [Nietzsche]
4489 Ignore authorities, and risk willing a goal! [Nietzsche]
20318 Philosophy produces an advance in being [Jaspers]
20321 Existenz needs equality and honesty [Jaspers]
20325 After freedom 'from' comes freedom 'for' [Jaspers]
22166 Normal Dasein has potential to be itself [Heidegger]
22229 Cowards and heroes make themselves [Sartre]
19619 To live authentically, reject philosophy [Cioran]
19634 We undershoot or overshoot life [Cioran]
20765 Man is a value-free brave naked will [Murdoch]
7677 The key is there is nothing to lean on [Berlin]
6691 We can't create values, only choose them [Graham]
6867 Existentialism means freedom and self-making [Le Poidevin]
21898 Present is future pull and past weight [May]

2. Nihilism

human life seems pointless and absurd

7072 Jacobi introduced the idea of nihilism [Jacobi]
22090 For me time stands still, and I with it [Kierkegaard]
20125 Teachers give purpose to what is empty [Nietzsche]
18286 Self-contempt is supreme experience [Nietzsche]
7847 Nihilism is first cosmic, and later cultural [Nietzsche]
9782 Nihilism should be active [Nietzsche]
7198 Belief in invented categories brings nihilism [Nietzsche]
19622 Motive is pointless, gesture irrelevant [Cioran]
19617 Evidences suggests we lack all purpose [Cioran]
19612 Matter is the hideous bastard of nothingness [Cioran]
9243 If life is absurd, act accordingly [Camus]
6708 Happiness and the absurd go together [Camus]

3268 We aren't absurd by being small or brief [Nagel]
6688 Life is only absurd if you hoped for sense [Graham]
6843 Meaninglessness is an achievement [Crichtley]

3. Angst

life permeated by insecurities and meaninglessness

20732 Lost in the cosmos, and terrified [Pascal]
22029 Ambiguous involvement brings irony [Schlegel,F]
22096 Anxiety is a response to human freedom [Kierkegaard]
22097 Learning correct anxiety is the ultimate [Kierkegaard]
21909 We need the right sort of anxiety [Kierkegaard]
20758 Anxiety is staring at vast freedom [Kierkegaard]
7078 Freedom is the end of moral certainty [Nietzsche]
2876 The possibility of suicide is a great solace [Nietzsche]
21952 Death anxiety brings freedom [Heidegger]
22224 Anxiety is running away from freedom [Heidegger]
22165 Anxiety reveals Dasein [Heidegger]
20755 'Anguish' comes from confronting my self [Sartre]
19604 Mankind seems lost in nature [Cioran]
19606 Mental limitations make life possible [Cioran]
19601 Life is now more dreaded than death [Cioran]
20761 Absurd existence can never be meaningful [Beauvoir]
20734 Stressed feelings reveal our freedom [Aho]

4. Boredom

there seems to be nothing worth doing

2912 Plato is boring [Nietzsche]
9299 We are bored by those whom we bore [Rochefoucauld]
21480 The need for activity leads to boredom [Schopenhauer]
21469 Boredom shows life is a mistake [Schopenhauer]
9305 Plebeians are boring; nobility are bored [Kierkegaard]
21910 Boredom is our ultimate destiny [Kierkegaard]
14844 Only proper workers experience boredom [Nietzsche]
9306 To ward off boredom at any cost is vulgar [Nietzsche]
20102 Boredom leads to art [Nietzsche]
20177 Bored people are never fully occupied [Russell]
20176 Boredom is a great motivating power [Russell]
20178 We are increasingly scared of boredom [Russell]
20179 Happiness involves enduring boredom [Russell]
20767 Unnoticed boredom dominates culture [Heidegger]
19602 Modern people must know boredom [Cioran]
19641 Boredom is the martyrdom of non-believers [Cioran]
19640 No one ever embraces inaction! [Cioran]
19644 History is the bloody rejection of boredom [Cioran]
9300 Boredom threatens our psychic survival [Frankfurt]
20290 Non-participation makes psychopaths bored [Singer]
20172 Boredom destroys our ability to evaluate [Kekes]
20173 Boredom is apathy and restlessness [Kekes]
9298 We can be unaware that we are bored [Svendsen]
9301 Even suicide could not overcome boredom [Svendsen]
9302 Boredom is lack of personal meaning in things [Svendsen]
9310 Boredom itself can be boring [Svendsen]

5. Existence-Essence

natures as either malleable or fixed in character

3635 Essence must precede existence [Descartes]
6916 Existence is appearance, essence is idea [Kant]
5650 Our essence requires subjective faith [Kierkegaard]
20130 You can't change your own essence [Nietzsche]
14808 Character changes steadily, but slowly [Nietzsche]
15572 Conceive essence in terms of existence [Heidegger]
6868 We have no pre-existing self [Sartre]
3842 Existence before essence [Sartre]
6705 Existentialism offers to transcend our natures [Graham]
20733 Create your existence, free of 'essence' [Aho]

6. Authentic Self

changing one's self into something more genuine

6231 People make themselves what they are [Cudworth]
20759 Be content with simple basic feelings [Rousseau]
8930 The in-itself must become for-itself [Hegel]
7073 I create everything out of my nothingness [Stirner]
5274 Liberty, by changing our consciousness [Marx/Engels]
22095 Aesthetic, ethical and religious subjectivity [Kierkegaard]
20314 People should be more individual [Kierkegaard]
7582 How to become what one already is? [Kierkegaard]
20275 Your are not complete. Cultivate yourself [Nietzsche]
6869 Humanity overcomes and remakes itself [Nietzsche]
2874 Human nature is not yet fixed [Nietzsche]

7150 Herd virtues are 'fixing' are nature [Nietzsche]
7177 Virtues should come from within, not outside [Nietzsche]
4513 Virtuous people obliterate their identity [Nietzsche]
20132 Self-awareness blocks fulfilment [Nietzsche]
20315 'Existenz' is the being I ought to have [Jaspers]
20317 Existenz is unique to each individual [Jaspers]
20319 Being must balance self and society [Jaspers]
20453 Authenticity is choosing yourself as hero [Heidegger]
15581 Dasein is only what it has chosen to be [Heidegger]
20760 Sincerity is shallower than authenticity [Sartre]
22231 We see determinism, to avoid freedom [Sartre]
3844 Man is whatever he makes of himself [Sartre]
20754 It is dishonest to offer passions as an excuse [Sartre]
22232 Authenticity is taking responsibility [Sartre]
22230 Situations greatly curtail our freedom [Sartre]
6690 Can existentialism condemn the sincere Nazi? [Graham]
20753 The self is its choices, in a context [Aho]

7. Existential Action

existentialist attitude to decisions and ethics

22027 We write the novel of our lives [Novalis]
20747 Quality of choice matters, not outcome [Kierkegaard]
16001 Understand backwards, but live forwards! [Kierkegaard]
20106 A will that can turn against itself [Nietzsche]
4504 All we have left is experiments in morality [Nietzsche]
20316 My actions move to or from Existenz [Jaspers]
6571 No moral theory can resolve a dilemma [Sartre]
3851 If I do not choose, that is still a choice [Sartre]
9242 Death, and intensity of life, matter [Camus]
9246 Integrity is poisoning just before the leap [Camus]
4245 Morals are passive as well as acts of will [Williams,B]
4246 We can't cure moral uncertainty by the will [Williams,B]
6689 How you choose, not what you choose [Graham]

8. Eternal Recurrence

implications of having to live the same life over and over

22093 Repetition is when the past becomes [Kierkegaard]
2936 Imagining having to endlessly relive a life [Nietzsche]
6842 Respond to nihilism by facing up to it [Nietzsche]
20124 Recurrence restores the value to life [Nietzsche]
20137 Great people can relive their life [Nietzsche]
7172 Imagine empty existence forever! [Nietzsche]
20144 Recurrence is the highest possible affirmation [Nietzsche]

24. Applied Ethics

A. Decision Conflicts

1. Applied Ethics

real life issues of moral principle

6998 Doing and allowing need clearer distinction [Jackson]
6479 Interference and noninterference need reasons [Nagel]
4657 Intended harm bad; foreseen harm possible [Glover]
7067 Food first, then ethics [Crichtley]
20877 Errors could be of principles or application [LaFollette]
20878 Nature, weight and application of criteria [LaFollette]

2. Dilemmas

moral situations with no clear course of action

5212 Better to die than do extreme evil [Aristotle]
21103 Only common opinion can decide dilemmas [Hume]
4656 Several absolute rights mean trouble [Glover]
4329 Resolved dilemmas leave a 'remainder' [Hursthouse]
4330 Dilemmas are apparent rule conflicts [Hursthouse]
4341 Forced vices are bad if they ruin a good life [Hursthouse]
4340 Forced dishonesty is not the vice itself [Hursthouse]

4. Autonomy

right of individuals to control their own lives

4653 Others' benefit justifies restricting freedom [Mill]
4654 Autonomy favours actual present opinions [Glover]
4655 If people don't mind death, you can kill them? [Glover]
4680 Autonomy matters more if it is important [Glover]

5. Omissions

harm done by a failure to act

20869 High morality omits nothing [Chrysippus]
7404 Nations must be restrained but needn't help [Grotius]
15824 We omit, or we commit an omission [Chisholm]
4692 Acts and omissions are not morally the same [Foot]

4694 Initial fatal events is worse than diversion [Foot]
4658 Disaster better if omission rather than action [Glover]
4659 Neglect can be as a bad action [Glover]
4660 Omissions are inevitable, but bad acts aren't [Glover]
20881 Duties need act/omission; consequences don't [LaFollette]
21136 Utilitarians conflate acts and omissions [Shorten]

6. Double Effect

morality of side-effects of an action

6896 What is foreseen, and what is intended [Mautner]
6897 Four conditions for double effect actions [Mautner]
7293 An unintended side-effect harm is legitimate [Grayling]
20068 Double effect may be a public relations trick [Stout,R]

B. Moral Rights

1. Moral rights

entitlement of some to be treated morally

4668 Rights imply the capacity for desire [Glover]
4670 There is no 'right to life' [Glover]
20879 Excessive options can lead to pressurising [LaFollette]
20880 Should people be forced to make choices? [LaFollette]

2. Sexual Morality

special moral problems of sexual relationships

5846 Seduction is worse than rape [Socrates]
298 Sex looks contemptible and should be secret [Plato]
1479 Love of pleasure leads humans to homosexuality [Plutarch]
6212 Lust is pleasure, and awareness of power [Hobbes]
21467 No human race if sex wasn't enjoyable [Schopenhauer]
18302 Men and women baffle each other! [Nietzsche]
19639 We all need sexual secrets! [Cioran]
20890 Do only sexual relationships need permanence? [Punzo]
20891 Is sex no more important than playing tennis? [Punzo]
20888 Consent is irrelevant in rape of children [Foa]
20887 All assault, not just rape, disregards persons [Foa]
20889 Men lust and women don't? So rape rules? [Foa]
18554 Prostitution corrupts soul via body [Scruton]

3. Animal Rights

concern with the pleasure or pain of animals

8236 Avoid animals to avoid compassion for them [Mencius (Mengzi)]
6005 Animals can't form justice contracts [Hermarchus]
20857 Animals are too unlike us for justice [Chrysippus]
1779 We've no duty to animals; they aren't like us [Chrysippus]
1868 The world is for animals as well as men [Celsus]
17215 Animals feel, but we can still use them [Spinoza]
19753 Don't mistreat animals if they are sentient [Rousseau]
3730 Non-rational beings are only valuable as means [Kant]
21423 We only have duties to persons [Kant]
21424 Animal cruelty is bad for our empathy [Kant]
20280 Just ask of animals, can they suffer? [Bentham]
21376 Philosophers see animals as insignificant [Schopenhauer]
14882 Vivisection is wrong [Nietzsche]
5915 Animals cannot claim to have rights [Ross]
4133 Speciesism has no judging viewpoint [Williams,B]
20283 Chimps have more value than defective persons [Singer]
21022 Animals should be seen as agents [Nussbaum]
21023 Respect animal natures, in us and animals [Nussbaum]
21024 Fine to kill animals that can't plan ahead? [Nussbaum]
4295 We see animals as fellow citizens [Scruton]
4296 Bear-baiting harms the audience [Scruton]
4263 We don't treat all animals as individuals [Scruton]
4268 Animal intentionality causes our sympathy [Scruton]
4276 Dogs respond to their own name [Scruton]
4277 Respect and fellow-feeling are different [Scruton]
4278 Lucky animals are victims of large predators [Scruton]
4279 We should accept natural animal suffering [Scruton]
4288 We have bred the needs of many animals [Scruton]
4289 Beef cattle live well and die easily [Scruton]
4291 Natural and contrived predation are different [Scruton]
4292 Species matter, not individual animals [Scruton]
4293 Natural culling is not compassionate [Scruton]
4294 Animals lack rights but we have duties to them [Scruton]

C. Death Issues

1. Death

value of death, especially in assessing evil

6330 Having no use for life is wisest [Lao Tzu]

339 We fear death even though it may be good [Socrates]
344 Death may be no worse than dreamless sleep [Socrates]
5229 Happy people dread death the most [Aristotle]
5234 Sometimes death is best [Aristotle]
14054 When death happens, we are absent [Epicurus]
14053 Only fear death when facing it [Epicurus]
14055 Good life and good death are linked [Epicurus]
5726 The dead are the same as the unborn [Lucretius]
13294 We know the oblivion of death already [Seneca]
13299 A good death is what matters, not life [Seneca]
13300 Lamenting death is like lamenting history [Seneca]
16764 Bodies dissolve when the soul departs [Toletus]
7495 Without the fear, dying is easy [Montaigne]
16763 We don't die because the soul departs [Descartes]
13173 Death is just an animal contracting [Leibniz]
19420 Death is just a transformation [Leibniz]
19346 Most dying people would relive their life [Leibniz]
4177 Sooner oblivion than relive your whole life [Schopenhauer]
14805 Does death exist among lower organisms? [Peirce]
20268 There are bigger losses than death [Nietzsche]
3265 The time before birth is NOT like death [Nagel]
4648 Death is permanent loss of consciousness [Glover]
6866 Are we real or unreal after we die? [Le Poidevin]
9304 Death terrifies if one hasn't lived [Svendsen]

2. Causing Death

moral issues about terminating a life

7907 Murder of the virtuous is worst [Buddhaghosa]
6832 Any unjust killing is like mass-murder [Mohammed]
6825 Only kill for a just cause [Mohammed]
4649 A life is worth saving if it is worth living [Glover]
4651 Killing loses happiness, and has side-effects [Glover]
4671 Kill, provide the deceased is replaced? [Glover]
4676 A killing must prevent other deaths [Glover]
4685 Spend more on known persons than statistics? [Glover]
7338 Man is God's image, and hence sacred [Johnson,P]

3. Abortion

morality of terminating a life before birth

2844 Abortion is permissible before sensation [Aristotle]
5508 For Aquinas a fertilized egg lacks a soul [Aquinas]
7225 Creating an undesirable life is a crime [Mill]
4695 Abortion okay despite the fetus's rights? [Thomson]
4696 Abortion is not an omission [Foot]
4057 Zygotes aren't persons, and acorns aren't oaks [Thomson]
4058 Do persons made by rape have no right to life? [Thomson]
4059 How can abortion to save a mother be murder? [Thomson]
4060 A right to life is not a right to your mother [Thomson]
4061 Right to life opposes unjust killing [Thomson]
4062 The sacrifice of pregnancy is not a moral duty [Thomson]
4131 Early and late miscarriage seem very different [Williams,B]
6999 Why are abortion and infanticide so different? [Jackson]
20284 Potential persons lack persons' rights [Singer]
4652 Killing and not conceiving seem similar [Glover]
4662 Early & late pregnancy give different pictures [Glover]
4663 Foetuses are (potentially) humans or persons [Glover]
4664 The 'potential' argument attacks contraception [Glover]
4665 For two weeks, a person can become twins [Glover]
4667 Suppose mothers had transparent wombs [Glover]
4666 Viability is a test for both young and old [Glover]
4672 Replace a weak child with a better one? [Glover]
4673 Abortion and non-conception are similar [Glover]
4674 Abortion on demand is essentially right [Glover]
4872 A brainless foetus is easier to abort [Dennett]
4054 I may become a person, as I become adult [Lockwood]
4055 Potential human beings have no status [Lockwood]
4056 Soul links to brain creation as well as death [Lockwood]
7587 Abortion is unique, hence difficult, problem [Scruton]
7103 Issues are women's rights and status of foetus [Statman]
20619 Abortion is ending life, or not starting one? [Tuckness/Wolf]

4. Suicide

morality of a person taking their own life

5228 Suicide is a type of cowardice [Aristotle]
14520 Seeking suicide motives is small-minded [Epicurus]
1831 Partake of life even if you go blind [Epicurus]
20858 Suicide is right, for country or illness [Stoic school]
3046 Stoics say suicide can be quite rational [Stoic school]

13298 Non-crisis suicide can still be right [Seneca]
13319 Suicide denies power over us [Seneca]
13320 Non-suicide is sometimes a duty too [Seneca]
4854 No one in essence desires suicide [Spinoza]
4677 If suicide is wrong, so is saving lives [Hume]
19739 Any suicide maxim is contradictory [Kant]
6188 Suicide can't be a universal law [Kant]
21471 Most people would prefer suicide [Schopenhauer]
18329 If our birth was an error, we can rectify it [Nietzsche]
4678 Suicide is the most obvious absolute wrong [Wittgenstein]
19611 No good anti-suicide arguments exist [Cioran]
19610 Religions see suicide as insubordination [Cioran]
19609 Not to contemplate suicide is pathetic [Cioran]
9248 Die unreconciled, not from free will [Camus]
7984 Suicide is willed, not just from depression [Baudrillard]
4679 Would you like to be mostly unconscious? [Glover]
7824 Contradiction if assisting suicide is illegal [Grayling]

5. Euthanasia

morality of mercy-killing for the very ill

7253 Legal euthanasia is an honourable death [More,T]
4050 You can't be both sane and mad with pain [Kamisar]
4051 People seek death to please other people [Kamisar]
4681 Nazi murders originated in their euthanasia [Glover]
4682 Voluntary, or involuntary, or non-voluntary [Glover]
4683 Involuntary: no autonomy, bad side-effects [Glover]
4684 Saving life, or prolonging death? [Glover]
4053 If a patient death is good, so is killing them [Rachels]
4052 Is passive euthanasia okay, but active not? [Rachels]
20882 Euthanasia: kill or not save, out of concern [Hooker,B]
20885 Euthanasia comes in six forms [Hooker,B]

25. Society

A. State of Nature

1. A People

concept of a people, prior to formation of a state

a. Human distinctiveness

7506 God made man in his own image [Anon (Tor)]
5245 Society depends on fair exchange [Aristotle]
5265 Man's basic nature is for pairing and families [Aristotle]
2803 Man is by nature a political animal [Aristotle]
2820 People like company, not just mutual aid [Aristotle]
12281 Man is intrinsically a civilized animal [Aristotle]
21396 Man is distinguished by knowing conditionals [Stoic school]
3065 We are made by nature for cooperation [Aurelius]
4855 Rational people live in harmony [Spinoza]
19756 Freedom, not intellect, distinguishes humans [Rousseau]
21412 Setting ends distinguishes humanity [Kant]
21435 Man is both social, and unsocial [Kant]
6934 Man is a universal being, not a particular [Feuerbach]
6936 Human essence is individuals in community [Feuerbach]
5275 Man is an animal that creates its own survival [Marx/Engels]
5292 Individuals only unite in class struggles [Marx/Engels]
21992 Men produce their own subsistence [Marx/Engels]
7166 Man is above all a judging animal [Nietzsche]
20740 Feelings are what distinguish humans [Unamuno]
2558 Man without society is just another animal [Rorty]
4365 Humans pursue good, for reasons [Hursthouse]
20356 Humanity is a synthesis of conflicting drives [Richardson]

b. The natural life

19889 Our individual needs require a society [Plato]
5133 Man is by nature a social being [Aristotle]
20842 Pure rational animals are gradually corrupted [Chrysippus]
19764 Hobbes gives savages social passions [Hobbes]
2367 The natural life of man is very unpleasant [Hobbes]
19882 We are naturally driven into society by needs [Locke]
19906 Countries are in a mutual state of nature [Locke]
19961 Primitive people are timid, so peace reigns [Montesquieu]
19962 Men do not desire to subjugate one another [Montesquieu]
19755 Simple solitary natural life is good [Rousseau]
19762 Which first, language or society? [Rousseau]
19763 Savages are unlikely to commit suicide [Rousseau]
19765 Savages are calm and benign, and thus good [Rousseau]
19771 Savage men quietly pursue desires [Rousseau]
19779 Primitive man was very gentle [Rousseau]

19778 Leisure produced violent modern savages [Rousseau]
19751 We start from self-interest and compassion [Rousseau]
19791 Natural mankind is too fragmented for war [Rousseau]
21075 The state of nature is always hostile [Kant]
20489 Humans can't flourish in a state of nature [Wolff,J]

c. A unified people

2805 A shared morality is the basis of a society [Aristotle]
19935 Peoples are made by individuals, not nature [Spinoza]
21874 Unanimity is best for our preservation [Spinoza]
19963 Need, fear, pleasure, knowledge make society [Montesquieu]
20008 There emerges a spirit in each nation [Montesquieu]
20501 Unified customs must precede law-giving [Rousseau]
7237 The act of its creates is a society's basis [Rousseau]
19792 People must unite their powers to survive [Rousseau]
19812 A people has a partial, moral life [Rousseau]
20414 Absolute Spirit is united human rationality [Hegel]
18296 Peoples need distinctive values [Nietzsche]
20662 Society has six sociobiological principles [Wilson,EO]
21936 Communities must be separate individuals [Derrida]
21937 Does democratic friendship enforce uniformity? [Derrida]
21137 Cosmopolitanism neglects 'peoples' [Rawls]
20155 Society alienates if it has wrong values [Kekes]
20483 Collective rationality assumed a consensus [Wolff,J]
20532 Should love be the first virtue of a society? [Wolff,J]
20582 World government needs a world people [Oksala]
20663 A gossip group is 150 people [Harari]
20564 Anti-colonialism focuses on 'peoples' [Swift]
20598 Who count as the 'people' in a democracy? [Tuckness/Wolf]
20614 Attachment to states may be weak [Tuckness/Wolf]

2. Natural Values

Values that seem self-evident in natural existence

a. Natural freedom

8020 Only self-knowledge can liberate us [Spinoza]
19864 Man's natural state is total freedom [Locke]
20581 If men are born free, are women born slaves? [Astell]
19774 Savages can steal, but not get obedience [Rousseau]
7232 Man is born free, but is in chains [Rousseau]
7234 No man has natural authority over others [Rousseau]
7212 Individuals are auto-sovereign [Mill]
8022 Freedom is absence of a contract [MacIntyre]

b. Natural equality

19865 All creatures of a species are naturally equal [Locke]
21099 Before education people are equal [Hume]
19772 Society produces human inequality [Rousseau]
19789 The rich hogging everything is unnatural [Rousseau]
20565 Men are born with equality, and rights [Jefferson]

c. Natural rights

7402 Self-preservation is a natural right [Grotius]
19914 In nature everything has a right to everything [Spinoza]
19915 Power, not reason, determines natural rights [Spinoza]
7412 Spinoza widely extended natural rights [Spinoza]
19866 Nature teaches us equality and respect [Locke]
19872 The fruits of the earth belong to us [Locke]
19907 Family inheritance is a natural right [Locke]
3732 Rational beings are part of the end of actions [Kant]
21071 Only rational basic rights can restrain [Kant]
21082 Nature may lack justice, but not be unjust [Kant]
20977 Natural rights is nonsense on stilts [Bentham]
21785 Rights aren't natural; they must be claimed [Hegel]
3773 No one is owed our benevolence [Mill]
3774 Justice gives rise to rights [Mill]
14822 If self-defence is moral, so is egoism [Nietzsche]
21940 Rights basis is defending to the death [Foucault]
8050 Natural or human rights are nonsense [MacIntyre]
5660 Allegiance comes before rights [Scruton]
7595 Rights may be just as basic as justice [Scruton]

3. Original Position

imagined position of individuals designing their society

a. Original position

3280 Why should the Original Position fix action? [Nagel]
20552 Original position citizens are free and equal [Rawls]
20594 Original choosers are only minimal people [Sandel]
20983 The initial position insures fairness [Sen]
20535 Maximise the average (with a safety net)? [Swift]
20596 Choose in ignorance of which country? [Tuckness/Wolf]

b. Veil of ignorance

20005 A lottery to decide who will be slaves? [Montesquieu]
18636 Ignore yourself when planning social justice [Rawls]
20595 How can you judge goods behind a veil? [Walzer]
20987 The veil of ignorance needs wider values [Sen]
20568 Rawls gets a benevolence society that's chosen [Oksala]
20593 The veil ensures its fair and unanimous [Tuckness/Wolf]

c. Difference principle

18631 Either equality, or favour the disadvantaged [Rawls]
3278 Egalitarianism must favour those at the bottom [Nagel]
18638 Subsidise the choices of others? [Kymlicka]

B. The State

1. Purpose of a State

reasons why a people forms itself into a state

7346 Powerlessness and goodness are linked [Jeremiah]
137 Goodness is order and organisation [Plato]
19890 Societies are for mutual benefit [Plato]
5140 Politics aims to improve people [Aristotle]
86 Bad politics makes friendship difficult [Aristotle]
2431 States are associations with a good purpose [Aristotle]
2822 The state is for noble actions, not survival [Aristotle]
3555 States are natural, not human inventions [Aristotle]
7487 Society exists to extend human awareness [Spinoza]
19943 The state seeks freedom for development [Spinoza]
19863 Make laws for property and protection [Locke]
19995 States need security, then their own purpose [Montesquieu]
21096 Justice is the sole purpose of government [Hume]
3921 The safety of the people is everything [Hume]
7247 The greatest goods are freedom and equality [Rousseau]
19816 A state's purpose is liberty and equality [Rousseau]
19838 Population increases in good states [Rousseau]
19855 Society aims to preserve our four basic rights [Mirabeau/committee]
7542 The best government teaches self-government [Goethe]
21485 The state only exists to defend citizens [Schopenhauer]
14838 The state is a mutual protection device [Nietzsche]
20367 Individuals are above the state, but need it [Nietzsche]
20937 States seek high civilisation for an economy [Gramsci]
20491 States have a monopoly of legitimate violence [Sartre]
15043 Every society has a politics of truth [Foucault]
18643 Only a minimal protective state is justified [Nozick]
20163 Ideology has an ideal-real gap [Kekes]
20164 Ideological dreams are embodied in some way [Kekes]
9311 We're in Utopia, and it is boring [Svendsen]
20674 Avoid degeneration, and aim for progress [Harari]

2. State Legitimacy

what justifies a state's power over the citizens

a. Sovereignty

20566 People abandon sovereignty in the contract [Hobbes]
19930 Sovereignty must enforce submission [Spinoza]
19787 Obedient people like giving orders [Rousseau]
20567 Sovereignty needs a means of expression [Rousseau]
19801 Sovereignty is the general will [Rousseau]
19805 The state controls members, like limbs [Rousseau]
19818 Political laws organise the state [Rousseau]
19848 The sovereignty does not appoint the leaders [Rousseau]
20086 Modern sovereignty has become relative [Reybrouck]
20608 Is just, but seen as unjust, legitimate? [Tuckness/Wolf]

c. Natural authority

19790 Mastery by force needs right and duty [Rousseau]
20142 States begin with conquest, not contracts [Nietzsche]
19613 Don't reject or accept society; endure it [Cioran]

d. Social contract

10 Men make a contract to avoid strife [Plato]
14515 Just laws are those useful in associations [Epicurus]
5654 Locke shows implications of contractual state [Locke]
19888 A society can only begin by consent [Locke]
6702 Using a road gives tacit assent to government [Locke]
19909 Unanimous agreements make societies [Locke]
21100 Social contracts undermine obedience [Hume]
20495 We are too helpless to give 'tacit assent' [Hume]
21101 People don't think they consent to government [Hume]
7233 Society is a right based on covenants [Rousseau]
19842 Start government with a law, not a contract [Rousseau]
21063 Social contracts for ends, or for duty [Kant]

21068 Majority decisions unanimously accepted [Kant]
21069 A contract guides which laws are acceptable [Kant]
20569 Kant extends social contracts internationally [Kant]
3909 A society is needed to make contracts [Hegel]
21119 Power is fine with a rational constitution [Rawls]
21019 Contracts assume actual equality [Nussbaum]
18635 There haven't been any actual social contracts [Kymlicka]
21035 Using roads is not ratifying the Constitution [Sandel]
8989 Benefits of freedom outweigh drawbacks [Scruton]
20490 Consent is irrelevant for utilitarians [Wolff, J]
20493 Social contract is inclusive and voluntary [Wolff, J]
20494 Voting grants legitimacy? [Wolff, J]
20984 Social contracts are confined to one society [Sen]
20738 Social contracts make society seem artificial [Aho]
20537 Hypothetical contracts have no binding force [Swift]

e. General will

2832 States prefer similarity among citizens [Aristotle]
13315 Government used to mean service [Seneca]
19910 Legislatures preserve their founding will [Locke]
7239 Society is each submitting to a general will [Rousseau]
19793 We must combine unity with freedom [Rousseau]
7240 To foreigners a state is an individual [Rousseau]
19795 Citizens and state are mutually committed [Rousseau]
19797 The general will is backed by force [Rousseau]
19796 We have the general will, and private wills [Rousseau]
7244 The 'general will' is not the 'will of all' [Rousseau]
19802 General will is reliable, unlike will of all [Rousseau]
19803 Associations weaken the general will [Rousseau]
19804 Separated voters achieve good results [Rousseau]
19808 Particular issues change the general will [Rousseau]
7246 The general will is good, but misunderstood [Rousseau]
7250 Laws are authentic acts of the general will [Rousseau]
19844 Constitution and leaders must be reaffirmed [Rousseau]
19846 A strong general will needs unanimity [Rousseau]
21070 Just laws must be acceptable to all [Kant]
21079 An a priori general will reveals the right [Kant]
19856 The general will of all citizens expresses law [Mirabeau/committee]
3778 Sum individual interests to get a community's [Bentham]
7210 The people's will is of the dynamic people [Mill]
22001 The real will of the cooperative will emerge [Marx]
20935 Parties lose touch with their classes [Gramsci]
20500 The general will is the general interest [Wolff, J]
20090 How to learn the will of the people? [Reybrouck]
20087 There are no 'national gut feelings' [Reybrouck]

3. Constitutions

formal statement of a society's structure and rights

5852 There are four types of constitution [Aristotle]
21046 Good constitutions create good citizens [Aristotle]
2821 There are three good & three bad constitutions [Aristotle]
2835 Any constitution will last for a short time [Aristotle]
2973 The best life dictates the best constitution [Aristotle]
1781 Constitutions need democracy and authority [Stoic school]
6309 Good laws and armies make a good state [Machiavelli]
21091 Constitutions must restrain, for general good [Hume]
21077 We need an inter-national constitution [Kant]
21078 Constitutions should be improved [Kant]
19861 Constitutions give rights, and separations [Mirabeau/committee]
18294 The state pretends that it is the people [Nietzsche]
21034 Constitutions should harmonise freedoms [Sandel]
21037 A ratified constitution may not be just [Sandel]

4. Citizenship

being a full member of a political state

1764 Diogenes claimed to be a citizen of the world [Diogenes of Sin.]
2818 Citizens' virtue is relative to constitutions [Aristotle]
20874 Citizens should ignore private advantage [Epictetus]
19892 Children are not born into citizenship [Locke]
19893 Enjoying a state gives tacit consent to it [Locke]
19894 Citizenship needs an expressed promise [Locke]
19854 An idle citizen is a thief [Rousseau]
19817 Citizens should be very dependent on the state [Rousseau]
19840 A citizen is a subject who is also sovereign [Rousseau]
21067 Citizens need independence and ownership [Kant]
21791 State and citizen commitment is mutual [Hegel]
20371 Citizens should attack society, to heal it [Nietzsche]
20986 Attend to those with interests, or good sense [Sen]

20542 Cosmopolitans overrule state control [Swift]

5. Leaders

one or more persons having power of government

a. Autocracy

11388 Let there be one ruler [Homer]
6320 Great rulers are invisible, the worst exploited [Lao Tzu]
19964 Paternal power does not prove autocracy [Montesquieu]
21089 Hold the highest power, or complete power? [Kant]
20936 Social paralysis produces Caesarism [Gramsci]
19627 Opportunists may be better than heroes [Cioran]

b. Monarchy

8240 True kings share pleasures with the people [Mencius (Mengzi)]
19936 Monarchs start wars for glory [Spinoza]
19937 Monarchs are too proud to back down [Spinoza]
19940 People will miss deposed royal authority [Spinoza]
19885 Civil society can't have an absolute monarch [Locke]
19972 A monarchy must have a nobility [Montesquieu]
19974 Monarchy needs a law-making body [Montesquieu]
19976 Ambition is good and safe in a monarchy [Montesquieu]
19978 Actions in monarchies all aim to look good [Montesquieu]
19985 The nobility are united by their heredity [Montesquieu]
19986 One monarch can act more quickly [Montesquieu]
21097 Modern monarchy is rule by law [Hume]
19798 King of a people, or of a land? [Rousseau]
19831 Officials in a monarchy are terrible [Rousseau]
19834 Training future monarchs doesn't work [Rousseau]
19833 Hereditary monarchy is easier, but bad [Rousseau]
19589 Monarchs are high-born ideal persons [Novalis]

c. Despotism

245 Tyranny destroys community spirit [Plato]
6305 Wipe out rulers, and keep taxes and laws [Machiavelli]
6306 Be generous, or destroy totally [Machiavelli]
6308 Do all the nasty things at the start [Machiavelli]
19886 All history debunks absolute power [Locke]
19903 Neither Nature nor contract allow despots [Locke]
19905 Despotism is fine over the propertyless [Locke]
19904 Despotism is legitimate for war prisoners [Locke]
19975 Despots always have to have a vizier [Montesquieu]
19977 Despotism and honour are incompatible [Montesquieu]
19988 Agents of despots become corrupt [Montesquieu]
19989 Magistrates are independent in despotisms [Montesquieu]
20007 Tyranny can be violent, or legislative [Montesquieu]
7227 Excess government power is evil [Mill]
20229 Authorities never accept criticism [Nietzsche]
20941 Totalitarians isolate their party members [Gramsci]
20579 Weak community produces modern tyrants [Arendt]
20580 Dictators thrive on true/false confusions [Arendt]
7981 Governments unite against terrorist peoples [Baudrillard]
20497 Dictators don't know what people want [Wolff, J]
21001 Famines usually result from authoritarianism [Sen]

d. Elites

7361 The most able people avoid politics [Confucius]
2132 Philosophers should run a society [Plato]
2149 Reluctant rulers are the best [Plato]
2819 A ruler just needs practical wisdom [Aristotle]
19970 Large nobilities need a senate to rule [Montesquieu]
19971 Popular aristocrats can be democratic [Montesquieu]
19984 Internal inequality among aristocrats is bad [Montesquieu]
21092 Nobles either share power or compose it [Hume]
7249 Elective aristocracy is the best government [Rousseau]
19829 Elective aristocracy is the only good form [Rousseau]
19830 One prince needs a nobility, to fill the gap [Rousseau]
21086 Hereditary nobility has not been earned [Kant]
20139 Only aristocracies can elevate humanity [Nietzsche]
20373 Aristocrats freely use others as instruments [Nietzsche]
20089 In bad times technocrats lose legitimacy [Reybrouck]
20088 Technocrats can replace politicians [Reybrouck]
20597 Wealth turns democracy into plutocracy [Tuckness/Wolf]
12405 'If you're aristocratic,' said Nietzsche... [Sommers, W]

6. Government

system for controlling the activities of a state

a. Government

6329 Active authorities make restless people [Lao Tzu]
19980 To be preserved, government must be loved [Montesquieu]
19996 A government has three sorts of power [Montesquieu]

3927 Society prefers helpful lies to harmful truth [Hume]
19820 States have legislature and executive [Rousseau]
19827 Keep legislature and executive apart [Rousseau]
7228 Individuals can act better than governments [Mill]
20254 People govern to avoid subservience [Nietzsche]
20939 Is parliament even a part of the State? [Gramsci]
22236 The early big question was how to govern [Foucault]
20506 Separation of powers is mutual monitoring [Wolff,J]

b. Legislature

5241 All legislation is just [Aristotle]
19895 An enabling law must precede the legislature [Locke]
19997 Judiciary and legislature must be separate [Montesquieu]

c. Executive

19900 The executive must be subject to legislation [Locke]
19821 The 'prince' is the executive branch [Rousseau]

d. Size of government

19824 Large populations need concentrated power [Rousseau]
19826 Democracy for small, aristocracy for larger... [Rousseau]

7. Changing the State

processes of changing government and state structure

a. Centralisation

7204 Only militarism supports the best humans [Nietzsche]
21947 Power is localised, so politics must be [Foucault]

b. Devolution

7230 Balance disseminated power and efficiency [Mill]
21522 Democracy also needs extensive devolution [Russell]
21523 No one wants a world parliament [Russell]

c. Revolution

19931 States mainly fear their own citizens [Spinoza]
19902 Impediments to legislation can be removed [Locke]
19908 Rebelling against illegitimate power is no sin [Locke]
19911 Don't obey legislators who enslave people [Locke]
19747 Revolution for liberty often makes it worse [Rousseau]
19837 Dispersed populations can't really revolt [Rousseau]
19843 The state need no leave authorities to rule [Rousseau]
21756 Category changes lead to revolutions [Hegel]
21991 Workers can only free all of humanity [Marx]
21990 Theory is also a force in revolutions [Marx]
20273 Revolutions give the delusion of fast recovery [Nietzsche]
20288 Weigh violent revolution against the evils [Singer]
21997 In Marxism the state will be superseded [Singer]
22258 Passion for progress is always short-lived [Sandel]

8. Religion in Society

relative roles of a government and a people's religion

2840 The state should pay for religious worship [Aristotle]
7486 Machiavelli freed politics from religion [Machiavelli]
19813 God is always invoked for new laws [Machiavelli]
7126 Religion brings goodness and order [Machiavelli]
20723 Obedience to God requires poverty [Calvin]
2361 Religion is permitted fear of invisible power [Hobbes]
19927 For uniformity, state must control religion [Spinoza]
19973 The clergy are essential to a monarchy [Montesquieu]
19987 Religions tend to reinforce despots [Montesquieu]
20004 Slavery is good for religious conversion [Montesquieu]
20011 Religion can fix failures in the law [Montesquieu]
19780 Progress is an illusion; humans have decayed [Rousseau]
19839 Flourishing arts are overrated [Rousseau]
19850 Jesus divided politics from religion [Rousseau]
19851 Every society has a religion as its base [Rousseau]
19852 Civil religion needs a few core ingredients [Rousseau]
19853 All harmless religions should be tolerated [Rousseau]
21085 The church invites homage to power [Kant]
14852 Culture cannot do without passions and vices [Nietzsche]
20108 Every culture needs a major myth [Nietzsche]
4495 Culture and civilization do not coincide [Nietzsche]
20948 Cultures are organic, and grow and die [Spengler]
19625 Religion should be compulsory and dubious [Ciorean]
12316 God was excluded from politics [Badiou]
21020 Establishment beliefs undermine respect [Nussbaum]
22266 Give religions liberty if they are moral [Sandel]
9600 Human cultures don't differ very much [Williamson]
15662 Culture is mainly a society's advertisement [Finlayson]
20679 We use dogmas to stabilise societies [Harari]
21124 Split church and state, for tolerance [Shorten]
20620 Religious views can't be excluded [Tuckness/Wolf]

21432 Cultures seek agreement on normality [Gibson,A]

9. Population

issues concerning the number of humans existing

a. State population

19993 Small republics have more solidarity [Montesquieu]
19992 In big republics the wealth is hard to manage [Montesquieu]
19814 Big enough to survive, small enough to control [Rousseau]
19815 Too much or little land creates wars [Rousseau]
19822 Large states lead to reduced liberty [Rousseau]
19823 Large populations need stronger government [Rousseau]

b. Human population

4675 'Sanctity of life' will increase abnormalities [Glover]
3783 What is the ideal population size? [Glover]
18625 Double a population to maximise utility? [Kymlicka]
20677 Population is up x14 since 1500 [Harari]
20688 People 300m tons, cows+ 700, wild 100 [Harari]

C. Social Justice

1. Social Justice

how morality should apply in a whole society

259 People deserve relative equality [Plato]
21044 Justice depends on the nature of the good life [Aristotle]
2825 States aim at justice, which implies equality [Aristotle]
21392 Justice is either absent, or self-injury [Carneades]
21057 Universal cosmopolitanism is the ideal [Kant]
21087 Human life is pointless without justice [Kant]
2911 Equality for equals, inequality for unequals [Nietzsche]
20543 Inequalities need no justification [Hayek]
21229 Equal injustice is at least fair [Morganbesser]
21018 Social contract for aliens, future, disabled.. [Rawls]
21041 Just concerns what we do about the facts [Rawls]
21009 There are ten capabilities [Nussbaum]
21010 Society should enable the capabilities [Nussbaum]
21013 Capabilities rest on humanity, not reason [Nussbaum]
21014 Rights should affirm government action [Nussbaum]
18655 Justice expresses respect to persons as ends [Kymlicka]
21027 Social justice concerns distributing valuables [Sandel]
21028 Justice involves welfare, freedom or virtue [Sandel]
21042 Should we redress past wrong-doing? [Sandel]
21043 Distributive justice also concern deserts [Sandel]
21048 Labour is just if it suits the worker's nature [Sandel]
21052 Justice is about how we value things [Sandel]
20534 Rights and justice are last resorts [Wolff,J]
20980 Anti-slavery doesn't need a big theory [Sen]
20978 Justice needs a way to achieve it [Sen]
20985 Don't embody justice - promote it [Sen]
20994 Skip just societies. Remove injustices! [Sen]
21000 Justice needs public democratic reasoning [Sen]
20533 Justice is fairness, entitlement or desert [Swift]

2. Social Freedom

extent to which citizens can follow private choices

a. Slavery

21047 Slavery must be necessary and natural [Aristotle]
21358 Slaves are natural labourers, or possessions [Aristotle]
19923 Slavery is subservience of interests [Spinoza]
17227 Slavery is a disgraceful crime [Spinoza]
19870 Attempted enslavement is war [Locke]
19883 Propertyless slaves cannot be citizens [Locke]
19913 Masters forfeit slaves if they abandon them [Locke]
20000 Slavery is bad, for masters and slaves [Montesquieu]
20003 Slaves can't be subject to a society's laws [Montesquieu]
20006 Only love of luxury justifies slavery [Montesquieu]
19775 Slavery requires initial dependence [Rousseau]
19784 Enslaved peoples often love their slavery [Rousseau]
19785 Children of slave women are not slaves [Rousseau]
19841 Full liberty sometimes needs full slavery [Rousseau]
19847 The sons of slaves are not slaves [Rousseau]
21789 Slaves have no rights, so no duties [Hegel]
21783 State slavery is a phase of education [Hegel]
21784 People are free, and slavery is unjust [Hegel]
21486 Poverty and slavery are the same [Schopenhauer]
5285 Abolition of slavery needs the steam-engine [Marx/Engels]
14819 Slavery cannot be judged by our standards [Nietzsche]
7353 Pharisees ruined slavery by giving them rights [Johnson,P]
18649 Self-ownership would block slavery [Kymlicka]

b. Freedom of belief

5754 You control body and possessions, not mind [Boethius]
19939 Opinions can't be abandoned, so aren't crimes [Spinoza]
19944 Trust requires liberty of thought [Spinoza]
19858 No one should be molested for opinions [Mirabeau/committee]
21848 Lines of flight escape the system [Deleuze]

c. Free speech

1766 The best thing in life is freedom of speech [Diogenes of Sin.]
20481 Retracting under pressure is the worst [Montaigne]
19942 Mere words can be treason [Spinoza]
20009 Social liberty requires free speech [Montesquieu]
2233 Tolerance of philosophy never hurt a state [Hume]
5621 Reason needs free discussion [Kant]
21058 Enlightenment needs public reasoning [Kant]
19859 We need free speech (with responsibility) [Mirabeau/committee]
21487 On balance a free press is bad [Schopenhauer]
7213 Capacity for free talk suggests liberty [Mill]
22268 Group insults hurt, if I am my group [Sandel]
22267 Liberals tolerate insults to groups [Sandel]
20586 Don't shout 'Fire!' in a crowded theatre [Tuckness/Wolf]

d. Free market

7670 That exploitation is an evil began with Kant [Kant]
5284 Communism abolishes market power [Marx/Engels]
18641 Just distribution is just free exchanges [Nozick]
18640 Libertarians see free markets as just [Kymlicka]
9129 You can buy water, but not all of it [Sorensen]
20524 Market prices contain much information [Wolff,J]
20685 No market is free of political bias or control [Harari]

e. Freedom of lifestyle

8234 Bondage and liberation frighten the fearful [Anon (Cent)]
20092 Liberty is to both rule and be ruled [Aristotle]
6679 It is not good to be too free [Pascal]
19924 Freedom is submitting to a rational state [Spinoza]
19871 Liberty is have laws made by consent [Locke]
19994 Freedom is ability to follow what is right [Montesquieu]
19746 Liberty can ruin people too weak to cope [Rousseau]
7242 Appetite is slavery; inner laws are freedom [Rousseau]
7675 Schiller was obsessed with freedom [Schiller]
22085 Institutions create freedom [Hegel]
21778 Liberal freedom is to act, and to desist [Hegel]
21779 We need freedom of options, as well as choice [Hegel]
20516 Freedom is intrinsically good, not instrumental [Wolff,J]
20517 Utilitarianism gives a guide to liberties [Mill]
7215 Freedom is individual, while respecting others [Mill]
7220 Restraint for its own sake is evil [Mill]
7218 Private actions are not accountable [Mill]
7221 Liberty can be infringed for safety [Mill]
7223 Tolerate or restrain pinging? [Mill]
5306 Freedom for each and freedom for all [Marx/Engels]
18304 Live as you desire, or don't live at all [Nietzsche]
21519 Freedom, then encourage creativity [Russell]
20544 Negative liberty good, positive liberty bad [Berlin]
21733 Right-wing freedom rests on self-ownership [Cohen,GA]
21739 Self-ownership doesn't ensure autonomy [Cohen,GA]
21946 Prisons gradually became our models [Foucault]
7418 Liberation suggests repressed human nature [Foucault]
9231 We want autonomy, rather than simple freedom [Frankfurt]
20527 Everyone should have equal access to liberties [Rawls]
21015 All liberties positively block interference [Nussbaum]
21017 Freedoms always limit other freedoms [Nussbaum]
18651 The freest freedoms may not be the best ones [Kymlicka]
18661 Ancient freedom was entirely political [Kymlicka]
9278 We identify the free life with the good life [Gray]
20518 Some laws breach the Liberty Principle [Wolff,J]
20531 Difference and Liberty mutually conflict [Wolff,J]
20995 Capability is an aspect of freedom [Sen]
20998 Freedom has different dimensions [Sen]
20693 Freedom - to leave, or not commit [Harari]
20545 Freedoms may involve a constraint and an aim [Swift]

f. Freedom to leave

19845 We can quit a state (at quiet times) [Grotius]

g. Social power

21132 Domination is getting probable obedience [Weber]
15040 Denounce power, but then analyse it [Foucault]
15041 Power is enticement as well as repression [Foucault]

8991 Foucault denies power is ever benign [Foucault]
7425 Retain power, but reduce domination [Foucault]
21133 Supreme power controls thoughts [Steven Lukes]
21135 There are eight modes of oppression [Shorten]

3. Social Equality

extent to which all citizens are equal

a. Grounds of equality

123 Only the weak like equality [Plato]
1402 Slaves and masters can never be friends [Plato]
262 Men and women should receive equal rewards [Plato]
20590 Give treatment proportional to equality [Aristotle]
2830 Each constitution has its own distinct aim [Aristotle]
2833 Give preference to those constitutions exclude [Aristotle]
2834 Only the weak want justice and equality [Aristotle]
19945 All people are equal before Jesus [Paul]
20485 People are equal, or inequality is unfounded [Hobbes]
2366 Men are similar, and deserve equal benefits [Hobbes]
19981 Equality never arises in autocracies [Montesquieu]
19991 True equality is between ranks of power [Montesquieu]
19786 The state makes three different inequalities [Rousseau]
19800 The social compact imposes equality [Rousseau]
20486 Only equality can oppose the anti-social [Kropotkin]
3233 There is positive as well as negative equality [Williams,B]
3234 Equality requires empathy with people [Williams,B]
3275 Equality now opposed by utility and rights [Nagel]
3277 Equal private whim or long-term & objective? [Nagel]
3281 Equality must be acceptable to each person [Nagel]
20277 Equality of interests is the minimum [Singer]
18621 The basic value is 'treat as equals' [Dworkin]
20528 Difference: all inequality to disadvantaged [Wolff,J]
20526 Diminishing utility implies equal shares [Wolff,J]
20997 Impartiality and objectivity imply equality [Sen]
20996 All theories of justice demand an equality [Sen]
20550 Three types of equality of opportunity [Swift]
20587 Flourishing is the main motive for equality [Tuckness/Wolff]

b. Political equality

19990 Ruled-rulers equality corrupts democracy [Montesquieu]
19857 Merit is the only qualification for a post [Mirabeau/committee]
4491 Equality is just a sum of zeroes [Nietzsche]
20940 Political equality requires economic equality [Gramsci]
3273 Political, social, legal or economic equality [Nagel]
3274 Equality is good for society or individuals [Nagel]
6478 Democracy does not really support equality [Nagel]
20592 Money inequality causes new inequalities [Walzer]
18633 Equal opportunity means it's your fault [Kymlicka]
18634 Equal social opportunity, but not talents [Kymlicka]
20503 Political equality also needs social equality [Wolff,J]

c. Legal equality

21076 Equality is submitting to what you impose [Kant]
21407 Equality is reciprocity of binding [Kant]
7340 Rule of law, with equality before it [Johnson,P]
18654 Justice is not needed in a good community [Kymlicka]

d. Economic equality

124 Nature favours the strong [Plato]
2814 Phaleas was the first to propose equality [Aristotle]
19880 All value depends on the labour involved [Locke]
19983 Democracy may need to restrict equality [Montesquieu]
19982 Get equality by categories, then taxes [Montesquieu]
3920 If we create equality, people will wreck it [Hume]
19788 The wealthy and powerful enjoy inequality [Rousseau]
7248 Inequality should never enable slavery [Rousseau]
21066 Citizens must be free to rise in rank [Kant]
3235 The very unequal don't even realise it [Williams,B]
20279 Equality of opportunity rewards good luck [Singer]
20549 Equality differs in different spheres [Walzer]
20148 Equal distribution ruins it for all? [Kekes]
21040 Formal equality in a market, or fair equality? [Sandel]
20536 Incentives for jobs needs inequalities [Swift]
20548 Redistribution may not be aiming at equality [Swift]
20591 Ignore wealth inequality without suffering [Tuckness/Wolff]

4. Legal Rights

concepts of granting and denying rights to citizens

a. Basis of rights

236 People who observe sound laws are happy [Plato]
2828 Law is intelligence without appetite [Aristotle]

19896 It is not a law if not endorse by the public [Hooker,R]
7827 The first modern political philosopher [Stewart,M]
19926 Sovereignty has total power over citizens [Spinoza]
6251 Perfect rights are vital, imperfect useful [Hutcheson]
21094 Rights are to power or to property [Hume]
20570 Our universal community implies wide rights [Kant]
20571 There are universal cosmopolitan rights [Kant]
21003 Only laws can produce real rights [Bentham]
7539 Duties without rights needs good payment [Goethe]
21781 The right to have rights is basic [Hegel]
3775 Rights are entitlements to protection [Mill]
20519 Liberal rights are confrontational [Marx]
7173 Rights need contracts and balance of power [Nietzsche]
5916 Rights broadened from legal beginnings [Ross]
21004 Human rights motivate legal rights [Hart,HLA]
4693 Negative and positive duties and rights [Foot]
3276 Rights have limited application to life [Nagel]
20285 Rights need desires? No right to life? [Singer]
8031 Lovers of natural rights can't agree on them [MacIntyre]
21016 Rights do not form separate groups [Nussbaum]
18652 Lockean freedom depends on rights [Kymlicka]
5653 Rights are enforced in the name of justice [Scruton]
5064 Rights come in four types [Mawson]
20513 Axiomatic rights can't be defended [Wolff,J]
20512 Six basic standard liberal rights [Wolff,J]
20514 How do we identify the natural rights? [Wolff,J]
20988 Non-citizens are not to be tortured [Sen]
20602 Some rights require people to act [Tuckness/Wolff]
20603 Rights cover people's interests [Tuckness/Wolff]
20604 Rights are to protect autonomy [Tuckness/Wolff]
20607 Having a right does not entail further rights [Tuckness/Wolff]

b. Alienating rights

2369 Men must yield rights in order to gain them [Hobbes]
19918 Society abandons appetites for reason [Spinoza]
19919 We give up rights in hope of some greater good [Spinoza]
19921 If you give up your rights, that's it! [Spinoza]
19925 In democracy the majority receive our rights [Spinoza]
19929 People fear the recipients of their rights [Spinoza]
19928 You can't give away your humanity [Spinoza]
19932 The Hebrews gave their rights to God [Spinoza]
19873 We own our bodies, and our work [Locke]
19884 All citizens must give up executive rights [Locke]
19794 Everyone must alienate their rights en bloc [Rousseau]
7241 Society bestows rights to liberty and property [Rousseau]
19806 Society only takes what it needs from us [Rousseau]
21065 Contracting out of making contracts? [Kant]
21084 The contract loses and then gains rights [Kant]

c. Property rights

6580 For Locke ownership is natural based on labour [Locke]
20520 Mixing of labour entitles you to land [Wolff,J]
19875 Ownership must be fair and distributed [Locke]
19874 Mixing labour with Nature gives ownership [Locke]
19876 Ownership doesn't need community assent [Locke]
19877 If you draw water, it's yours [Locke]
19878 Labour ownership must not be wasted [Locke]
19879 Cultivation and need fix ownership [Locke]
19898 Armies can kill soldiers, but not rob them [Locke]
12548 Injustice is property violation [Locke]
6581 For Hume property is merely conventional [Hume]
21102 The history of property is unjust [Hume]
21095 Property does not found all government [Hume]
19777 Inventing ownership began society [Rousseau]
19782 Property must arise from added labour [Rousseau]
19781 Land cultivation needed a right of ownership [Rousseau]
19754 What exactly does 'belonging to' mean? [Rousseau]
19799 The public have prior ownership of everything [Rousseau]
21090 If you create a thing, you own it [Kant]
19862 Property is a sacred right, rarely breached [Mirabeau/committee]
21782 Man has a right to appropriate things [Hegel]
20523 Property is theft! [Proudhon]
5291 General will is said to back private property [Marx/Engels]
21524 Owning land gives a right to an income [Russell]
21734 There is no initial right of ownership [Cohen,GA]
21736 Was any property originally legitimate? [Cohen,GA]
21735 All private things were once unowned [Cohen,GA]
20539 Three legitimate routes to property holding [Nozick]

18645 Must initial holdings include property rights? [Kymlicka]
18646 Initial acquisition may have been immoral [Kymlicka]
18647 Initial property acquisition denies rights? [Kymlicka]
20521 Own the sea by mixing in my tomato juice? [Nozick]
21737 Harmless acquisition of things is fine [Nozick]
21738 Was land originally owned collectively? [Cohen,GA]
20522 Ownership ensures best use of resources? [Wolff,J]
20096 Roman law entrenched property rights [Micklethwait/Wooldridge]
20541 Ownership rights are not transfer rights [Swift]
20546 Private property is a denial of freedoms [Swift]

5. Right to Punish

right of state to punish crime or anti-social behaviour

a. Right to punish

7294 No crime or punishment without a law [Roman law]
2380 Punishment is either reform or deterrence [Hobbes]
19867 Punish only for reparation and restraint [Locke]
19869 Punishment should make crime a bad bargain [Locke]
19912 Punishing our superiors is unnatural [Locke]
12936 There are natural punishments [Leibniz]
20002 The death penalty even protects murderers [Montesquieu]
20010 Determinist needs stricter penalties [Montesquieu]
19810 Criminals cease to be citizens [Rousseau]
19809 Citizens must submit to the death penalty [Rousseau]
21088 The justice of the death penalty is a priori [Kant]
7219 Society can punish if others are hurt [Mill]
14814 Execution is worse than murder [Nietzsche]
20232 Get rid of the idea of punishment! [Nietzsche]
6572 Purposes of punishment can conflict [Fogelin]
6573 Retributivists say a crime can be 'paid for' [Fogelin]

b. Retribution for crime

1659 Protagoras separated punishment & revenge [Protagoras]
1661 Socrates saw no justification in retaliation [Vlastos]
1755 Pardon faults, which are never intentional [Aristippus elder]
8241 Only execute if there is unanimity [Mencius (Mengzi)]
1660 Vengeance is a noble thing [Aristotle]
19770 Originally there was redress, not punishment [Rousseau]
7673 Retribution is better than hospital for crimes [Kant]
21433 Violating rights deserves vengeance [Kant]
18300 Punishment avenges suffering [Nietzsche]
1658 Greek had one word for avenge and punish [Vlastos]
20617 How should punishments fit crimes? [Tuckness/Wolff]

c. Deterrence of crime

1743 We should share the indignation of the injured [Solon]
2640 Our robbers are undeterred by threats of death [Cicero]
6833 Punish theft by cutting off hands [Mohammed]
19811 Only make examples of dangerous people [Rousseau]

d. Reform of offenders

21744 Improve desires rather than curb them [Russell]
21116 Power shapes identities and lifestyles [Foucault]

D. Political Doctrines

1. Political Theory

general ideas about theories of political principle

21384 The Stoics saw the whole world as a city [Stoic school]
20859 Democracy, monarchy and aristocracy [Stoic school]
15664 Ideology is socially necessary illusion [Adorno]
21906 Political theory should study small things [Deleuze/Guattari]
20530 Utility, or maximin, or maximax? [Wolff,J]
21118 Constitutional Patriotism is political unity [Shorten]

2. Social Utilitarianism

maximum happiness as the aim of government

20515 Combine privacy and utility interventions [Mill]
20588 Aim for utilitarian institutions [Sidgwick]
20538 Utilitarians neglect separateness of persons [Swift]
21011 Injustice can warp people's preferences [Nussbaum]
18623 Past entitlements block the general good [Kymlicka]
18628 Prejudiced preferences should not count [Kymlicka]
18630 Utilitarianism lacks a clear politics [Kymlicka]
18629 Living by utilitarianism is very cold [Kymlicka]
18637 You can't abandon rights, just for benefits [Kymlicka]
20529 Utilitarianism: free market plus welfare [Wolff,J]
20574 Utilitarians lack responsibility,duties,rights [Oksala]

3. Anarchism

self-rule by citizens, and abolition of government

539 Nothing is worse for mankind than anarchy [Antiphon]

5968 Diogenes masturbated in public [Diogenes of Sin.]
21521 Anarchy does not maximise liberty [Russell]
18642 Individuals are strong, so the state is weak [Nozick]
20450 States limit, so federalist anarchism [Critchley]
20452 Anarchism now concerns responsibility [Critchley]
20488 Anarchism needs the authority of experts [Wolff,J]
20487 Realistic anarchism is liberal democracy [Wolff,J]
20578 Anarchists prefer local communal government [Oksala]
9391 Why do anarchists drink herbal tea? [Sommers,W]

4. Conservatism

government based on cultural tradition and stability

7257 Modern societies are conspiracies of the rich [More,T]
21988 Society is Mind, and right as it is [Singer]
22259 Communal or individualist conservatism? [Sandel]
7588 Allegiance is basic to the conservative view [Scruton]
8990 So-called 'liberation' is the enemy of freedom [Scruton]
20451 If humans are wicked, authoritarianism [Critchley]

5. Democracy

government with direct involvement of the people

a. Nature of democracy

87 Democracy encourages friendship [Aristotle]
2823 Inferior people may become good as a group [Aristotle]
2826 Like water, multitudes are harder to corrupt [Aristotle]
1541 Rather poor in a democracy than rich elsewhere [Democritus (att)]
5895 A group of fools is not collectively wise [Cicero]
13557 Majorities don't favour what is best [Seneca]
21938 Democratic individuality and equality conflict [Grotius]
6682 Majorities are dim but clear and authoritative [Pascal]
19887 Unanimously make a state, with majority rule [Locke]
19901 People have supreme power, to dump governments [Locke]
19998 Representative of people are more accountable [Montesquieu]
7238 Majorities depend on prior unanimity [Rousseau]
19825 Democracy is most citizens run the state [Rousseau]
19828 Democracy leads to internal strife [Rousseau]
19835 When ministers change the state changes [Rousseau]
7229 Autonomous people can control governments [Mill]
18331 Democracy is declining organisation [Nietzsche]
21526 Ordinary voters can't detect insincerity [Russell]
21527 Majorities are always wrong on new questions [Russell]
20287 49% can be wrong, then so can 51% [Singer]
7594 Democrats are committed to contradictions [Scruton]
21131 Democracy is just competition for support [Posner]
20510 Democracy can't include freedom and equality [Wolff,J]
20511 Democracy expresses equal respect [Wolff,J]
20502 Democracy and inequality can co-exist [Wolff,J]
20496 True democracies can't dominate outsiders [Wolff,J]
20509 A minority's continual defeat is a problem [Wolff,J]
21002 Effective democracy needs tolerant values [Sen]
20085 Democracy gives legitimacy with efficiency [Reybrouck]
20559 Democracy's the least worst type of government [Swift]
20561 Equal votes because no right answers? [Swift]
20563 Aim for stability, or good decisions? [Swift]
20562 Aim for equal citizens, or better citizens? [Swift]
21129 Democracy:selection, participation, discussion [Shorten]
21130 Democracy good in itself, or for outcomes? [Shorten]
20606 Democracies are more likely to be right? [Tuckness/Wolf]
20600 Which decisions should be democratic? [Tuckness/Wolf]
20601 Discussion before voting is essential [Tuckness/Wolf]

b. Consultation

1566 Elections are democratic, drawing lots is not [Anon (Diss)]
19965 Basic to democracy is deciding the franchise [Montesquieu]
19968 In democracy the people name ministers [Montesquieu]
19969 Vote in public, for good influences [Montesquieu]
19999 All citizens, bar the poorest, should vote [Montesquieu]
19748 Plebiscites rashly bypass the leadership [Rousseau]
7243 Silence of people implies consent [Rousseau]
19832 Democratic elections are dangerous intervals [Rousseau]
21792 States reflect all interests, not popularity [Hegel]
20508 Voting should be open, and accountable [Mill]
20507 Voting is a strict duty, aimed at public good [Mill]
14846 Choose happiness, as well as maximise it [Nietzsche]
20498 Vote for self-interest or for the common good? [Wolff,J]
20499 Sensible voting leads to very good results [Wolff,J]
20979 Democracy needs everybody to be heard [Sen]
20999 'Government by discussion' is now popular [Sen]

20095 Referendums voters know very little [Reybrouck]
20609 With many losers a runoff seems good [Tuckness/Wolf]
20605 Mandatory voting depends on rights [Tuckness/Wolf]
20599 Are some people's votes more important [Tuckness/Wolf]

c. Direct democracy

141 Politics should lead people, not indulge them [Plato]
19920 Democracy is legitimate decisions of a group [Spinoza]
19967 Democracy needs minimal delegation [Montesquieu]
19966 Assemblies need a fixed number [Montesquieu]
19749 Only leaders can propose new laws [Rousseau]
20505 Direct democracy puts ignorance in charge [Mill]
21528 Social groups should be autonomous [Russell]
20094 To really govern people, involve them [Reybrouck]
20560 Teledemocracy omits debate and deliberation [Swift]

d. Representative democracy

2817 Good candidates shouldn't seek office [Aristotle]
7254 Seekers of offices should be disqualified [More,T]
7251 The English are slaves between elections [Rousseau]
20558 Giving the electorates opinion is a betrayal [Burke]
22041 Do local representatives care about the whole? [Hegel]
20504 Large communities need representatives [Mill]
16009 Personal 'freedom' evades responsibility [Kierkegaard]
7976 We avoid power through democracy [Baudrillard]
22264 Rights are to protect minorities [Sandel]
7477 Modern democracy is elective oligarchy [Watson]
20093 Lots are more democratic than elections [Reybrouck]
20091 Representatives are to avoid democracy [Reybrouck]
21126 Representatives:obedient, sensible, or typical [Shorten]
21128 Do the reps mirror the population makeup? [Shorten]
21127 A rep's loyalties and promises may conflict [Shorten]

6. Liberalism

emphasis on rights and freedoms for individuals

5575 Aim for maximum mutual freedom [Kant]
21055 Combine freedom with constraint [Kant]
21056 Social vitality needs liberal freedom [Kant]
21064 Freedom, equality, independence! [Kant]
21080 Right maxims respect universal freedoms [Kant]
7211 Harm to others justifies power [Mill]
7217 Interference with freedom is usually wrong [Mill]
7231 The value of a state is its individuals [Mill]
18662 Liberal freedom is the right to be separate [Marx]
18332 Institution creation is anti-liberal [Nietzsche]
21495 Politics is entirely about individual lives [Russell]
20938 Liberalism's weakness is its bureaucracy [Gramsci]
15669 Communication necessitates liberal values [Habermas]
9277 Rawls rests everything on conventional morals [Gray]
6448 Society must be partial and impartial [Nagel]
7977 Individuality is a recent development [Baudrillard]
18644 Compulsory welfare and protection are wrong [Nozick]
21008 Liberalism does not need many values [Nussbaum]
18632 Liberalism prioritises basic liberties [Kymlicka]
18656 Liberalism allows exploitation of labour? [Kymlicka]
18663 Modern liberalism has invented privacy [Kymlicka]
21120 The 'unencumbered self' has few attachments [Sandel]
22261 Rights first, and justice is neutral [Sandel]
22263 Liberal justice distances the self [Sandel]
21049 Liberalism is a response to assigned destinies [Sandel]
7593 Freedom, natural rights and tolerance [Scruton]
22251 Liberalism ignores that most goods are shared [Haldane]
21905 Liberalism concerns the governed, not rulers [May]
20690 States foster individualism to break community [Harari]
20100 Free opinion, private life, speech, property [Micklethwait/Wooldridge]
20553 People don't choose individual values [Swift]
21115 Choosing your own life could be bad [Shorten]
21113 Liberals have equal rights and free ends [Shorten]
21117 Liberalism just respects freedom and equality [Shorten]
21122 Welfare and democracy need shared nationality [Shorten]
21121 Liberalism can still promote nationalism [Shorten]
21123 More community, or go cosmopolitan? [Shorten]
21134 Liberal individuals are social creations [Shorten]

7. Communitarianism

controlling society to enable individuals to flourish

5841 Obey the law for happiness and victory [Socrates]
2131 Society should aim to produce good people [Plato]
239 Virtue produces good justice-loving citizens [Plato]

8237 Extend family values into society [Mencius (Mengzi)]
5260 Communities need friendship more than justice [Aristotle]
5264 Friendship involves sharing [Aristotle]
7668 Herder invented the idea of roots [Herder]
22034 Individualism, but agency is social [Hegel]
8936 Human nature is only found in communities [Hegel]
21790 The social aspect makes morality ethical [Hegel]
8030 The moral life needs a community [Hegel]
5293 Freedom is only possible within a community [Marx/Engels]
22091 Inwardness before community [Kierkegaard]
20576 Early Marx was communitarian [Marx]
7492 Societies were communities, now associations [Tönnies]
18657 Communitarians foster orthodox goods [Kymlicka]
18659 The self is social, not 'Kantian' [Kymlicka]
18660 Communitarians like the study of history [Kymlicka]
22260 Liberals need to envisage the common good [Sandel]
22265 Community values can be wrong [Sandel]
10333 The community is the primary knower [Kusch]
20689 In 1750 losing your community meant death [Harari]
20556 Wars are especially good community builders [Swift]
20557 Inclusion in community implies exclusion too [Swift]
20554 Multiculturalism undermines state-as-community [Swift]
20555 Liberals protect us from too much community [Swift]
21114 Liberals treat individuals as mutual strangers [Shorten]
20613 Families have non-consensual obligations [Tuckness/Wolf]

8. Socialism

control of main beneficial institutions by government

21525 The state as sole employer is oppressive [Russell]
20575 Socialism needs enough power to enslave [Hayek]
20097 Freedom from want, and equal opportunity [Micklethwait/Wooldridge]
20540 Wealth redistribution treats people as means [Swift]

9. Communism

emphasis on equality, shared resources and unity

19745 People are what their government makes them [Rousseau]
5273 Consciousness enslaves men or unites them [Marx/Engels]
5283 No strict division of labour in communism [Marx/Engels]
5282 Non-voluntary activity alienates and enslaves [Marx/Engels]
5288 Control material production and control ideas [Marx/Engels]
5290 The revolutionary class represents all classes [Marx/Engels]
5294 Proletarians need revolution for individuality [Marx/Engels]
5302 Modern government is for the bourgeoisie [Marx/Engels]
5304 Communism aims to abolish bourgeois property [Marx/Engels]
5307 Much bourgeois altruism is selfish [Marx/Engels]
21989 Alienation by money dominates us [Marx]
21999 Concealment causes false consciousness [Marx]
18653 Equal rights don't actually achieve equality [Marx]
21995 Which is prior, production or superstructure? [Singer]
20577 Workers' goods are bought with stolen money [Marx]
21996 Freedom only comes when labour ends [Marx]
22000 From by ability, to by need [Marx]
21240 Oppressed people always have the truth [Sartre]
20445 Marxism gives up individualist ethics [Levinas]
21993 Materialist history controls us [Singer]
21831 Alienation is inability to satisfy desires [Flanagan]
9303 Is 'alienation' still applicable? [Svendsen]
20099 History is driven by the proletariat [Micklethwait/Wooldridge]

10. Theocracy

rule by a religious group

7572 Power is God-given, so resistance is damnable [Paul]
19933 Religion as law embraces all justice [Spinoza]
19938 Priests interfering in the state is bad [Spinoza]
19849 Originally the god was also the king [Rousseau]
7337 Crimes are sins, and sins are crimes [Johnson,P]
7339 No death penalty for mere property violations [Johnson,P]
7825 Christian reunification is the aim [Stewart,M]

11. Capitalism

society is driven by private production and profit

20720 Time and credit are money; money makes money [Franklin]
20680 Profit-seeking increases collective wealth [Smith,A]
20525 Markets produce waste and alienation [Engels]
21994 Handmill is feudalism, steam mill capitalism [Marx]
20958 Capitalism makes everything a commodity [Marx]
20722 Low consumption, saving, investment... [Weber]
20724 Monastic asceticism drives the new economy [Weber]
20717 Capitalism is opposed to greed [Weber]

20718 Free labour, separate business, book-keeping [Weber]
21518 Men group for greed, which they idealise [Russell]
21853 Capitalism is spreading through society [Deleuze]
22254 Capitalist liberty leads to democracy [Novak]
22252 Capitalism may be very good for community [Conway,D]
22253 Capitalism varies with government involvement [Conway,D]
22255 Capitalism needs welfare for broken families [Conway,D]
22256 Capitalism prefers representative democracy [Conway,D]
22257 Capitalism is individualist and anti-family [Conway,D]
20960 Capitalism can still improve society [Bowie]
20681 Use profits to increase production [Harari]
20682 All goods depend on economic growth [Harari]
20683 Capitalism relies on scientific inventions [Harari]
20687 Rich invest, the rest go shopping [Harari]
20098 Is free capitalism self-correcting? [Micklethwait/Wooldridge]

12. Feminism

focus on giving women a full role in government
21083 Women have no role in politics [Kant]
21006 Give women rights and they will show virtues [Wollstonecraft]
20746 Not born a woman, but become one [Beauvoir]
21125 The family is a great oppressor of women [Nussbaum]
21012 Women are often treated like children [Nussbaum]
20751 Becoming feminine is acting as fragile [Young,IM]
20551 Men have structured all of our institutions [Swift]

13. Green Politics

focus on global issues concerning the environment
20993 Stopping smallpox doesn't harm nature [Sen]

E. State Functions

1. The Law

principles enshrined in a state's legislation
a. Legal system
6326 Prominent law breeds criminals [Lao Tzu]
422 Law is as vital as a city wall [Heraclitus]
7810 Law replaces blood feuds [Aeschylus]
347 Support the law, even when it makes mistakes [Socrates]
2806 Man without law is the worst of animals [Aristotle]
2816 Easily changing the law weakens it [Aristotle]
2827 The law should rule, not individuals [Aristotle]
19891 Law shows citizens what is expected [Hooker,R]
19881 The aim of law is to facilitate freedom [Locke]
19819 Civil laws binds citizen, in liberty [Rousseau]
14847 Should law be accurate, or simple? [Nietzsche]
20932 Law needs further 'rules of recognition' [Hart,HLA]
20612 Obey the law since it's like a promise [Tuckness/Wolf]
20611 Can we be picky about which laws to obey? [Tuckness/Wolf]

b. Natural law

5246 Natural justice is the same everywhere [Aristotle]
20856 Justice and the law are natural [Chrysippus]
3561 Stoics originated the concept of natural law [Stoic school]
22114 Tyrannical laws are irrational, and not laws [Aquinas]
22113 Practical reason perceives natural law [Aquinas]
19897 Human law must fit with natural law [Hooker,R]
7406 Preserve self, but avoid doing harm [Grotius]
22133 Base natural law on actual humanity [Grotius]
20484 Obey natural law, if others obey it [Hobbes]
6225 Obedience to law is older than law [Cudworth]
6216 Natural law in non-civil moral truth and duty [Cumberland]
19916 Nature permits everything that is possible [Spinoza]
19868 Only nature justifies punishing foreigners [Locke]
7574 Medieval natural law was revived at Nuremberg [Leibniz]
19959 Prior to positive laws there is natural equity [Montesquieu]
19960 Animals may disobey their natural laws [Montesquieu]
19750 Is natural law just plausible agreements? [Rousseau]
7245 Natural justice benefits the exploiting wicked [Rousseau]
7591 Kant gave a non-religious base for natural law [Scruton]
20933 Base law on morality, not on efficiency [Zimmermann,J]
20610 Use cultural values, not natural law? [Tuckness/Wolf]

c. Legal positivism

7403 Just self-preservation not complex natural law [Grotius]
7573 Law is merely a form or procedure [Hobbes]
20930 The existence and value of laws are different [Austin,J]
20931 Positivism still needs democratic acceptance [Hart,HLA]
7592 Is it law because of form or content? [Scruton]
20492 Some laws (e.g. traffic) are not moral [Wolff,J]

2. Taxation

rights and extent of government taking citizens' wealth
19899 Taxation needs the consent of the people [Locke]
19836 Taxes are fine, if they circulate quickly [Rousseau]
19860 Everyone must contribute, in just proportion [Mirabeau/committee]
18639 Taxes copy an imaginary insurance market? [Dworkin]
20684 Investment is largely replacing taxation [Harari]

3. Welfare provision

government's help for weaker members of the state
7226 Self-help is also educational [Mill]

4. Education

training the young to become citizens
a. Education principles
1552 The state should pay for universal literacy [Protagoras]
5833 Education is the greatest of human goods [Xenophon]
2148 To gain knowledge, turn from becoming to being [Plato]
2152 Dialectic is the summit of the curriculum [Plato]
331 Bad government produces bad characters [Plato]
238 Education directs pleasures and desires [Plato]
257 Maths is crucial to education [Plato]
260 Education is the supreme task of a state [Plato]
3037 Educated to uneducated as living to dead [Aristotle]
8768 Books are endless, and study is wearisome [Anon (Ecc)]
13304 Learning is vastly more rewarding [Posidonius]
5305 Communism frees education from the rulers [Marx/Engels]
19245 Ignorance, not knowledge, motivates study [Peirce]
8619 Awareness of ignorance precedes learning [Frege]
14886 Education is contrary to human nature [Nietzsche]
14839 Education blossoms when God declines [Nietzsche]
14848 Education in large states is mediocre [Nietzsche]
3983 Learning is evolution in the brain [Dennett]

b. Aims of education

532 Successful education must go deep [Protagoras]
322 True intelligence is rational and teachable [Plato]
2811 Education unifies a plural society [Aristotle]
2847 Education prepares for amusement of adults [Aristotle]
11150 Entertain ideas without acceptance [Aristotle]
19979 Monarchs and despots differ on education [Montesquieu]
8106 Child rearing must think about old age [Joubert]
7224 State education stunts individual thinking [Mill]
14845 Our education crushes the life out of youth [Nietzsche]
4247 Ethical values imply education [Williams,B]

c. Teaching

8151 Let your teacher be a god to you [Anon (Upan)]
1565 We learn language, but who teaches it? [Anon (Diss)]
2153 Compulsory education is soon forgotten [Plato]
222 Knowing and teaching the forms is a rare gift [Plato]
1638 Education by intimidation doesn't work [Plato]
4331 Education trains feeling before reason [Plato]
250 Education by example is best [Plato]
5150 Instruct the intellect, drill morality [Aristotle]
2842 Education comes from habit and listening [Aristotle]
11241 Wise people should teach [Aristotle]
13290 Learning's pleasure is enabling teaching [Seneca]
13322 Improvement of the pupil is the one aim [Seneca]
17226 The best is to teach rationality to others [Spinoza]
19957 We learn to love when we teach [Montesquieu]
19580 A good pupil only needs a hint [Novalis]
14834 Teachers focus too much on their pupils [Nietzsche]
2908 We needed educated educators [Nietzsche]
2889 Pupils should not remain pupils [Nietzsche]
3973 'Getting it right' implies a teacher [Davidson]

d. History study

1866 History can never repeat itself [Anon (Par)]
19593 World history shapes great people [Novalis]
21987 History is increase of freedom awareness [Hegel]
5279 History is a matter of industry and exchange [Marx/Engels]
5286 Historians share the illusions of their epoch [Marx/Engels]
5301 All history of societies is of class struggles [Marx/Engels]
14883 We should evaluate the past morally [Nietzsche]
20261 History only concerns supposed events [Nietzsche]
19605 No one has found a goal for history [Cioran]
19637 History is wonderfully devoid of meaning [Cioran]
15039 History is analysable but meaningless [Foucault]
7979 The news media have terminated history [Baudrillard]

20675 Learning more history increases confusion [Harari]
20676 Now is not inevitable, as history shows [Harari]

5. War

government's right to wage war on other states
7988 Fighting a just war is good [Anon (Bhag)]
8238 Peace through war is fish up trees [Mencius (Mengzi)]
22120 Augustine contributed to just war theory [Augustine]
7291 War must be justified, legal, and aim at good [Aquinas]
6307 Conquest is normal, and never criticised [Machiavelli]
7255 Only Utopians fail to see glory in warfare [More,T]
20479 Soldiers care little about who wins [Montaigne]
20001 Safety is the only right over captives of war [Montesquieu]
19783 A state of war can remain after a conquest [Rousseau]
7236 Unnecessary destruction is wrong in war [Rousseau]
21072 The people themselves should declare a war [Kant]
21073 Hiring soldiers is to use them as instruments [Kant]
21074 Peace needs some trust during the war [Kant]
14836 Sacrifice justifies unwanted wars [Nietzsche]
20253 Modern wars arise from the study of history [Nietzsche]
18320 The grand life requires war [Nietzsche]
21851 States and war-machines are opposed [Deleuze]
7292 War must be hopeful and moderate [Grayling]
20691 Real peace is the implausibility of war [Harari]
20616 Five principles in fighting a war [Tuckness/Wolf]
20615 Six criteria for a just war [Tuckness/Wolf]

26. Natural Theory

A. Speculations on Nature

1. Nature

everything existing in known reality
589 Humans invented the idea of nature [Empedocles]
454 Things can be neither finite nor infinite [Zeno of Elea]
310 The world is like its maker, so it is good [Plato]
311 The cosmos is unique, like its maker [Plato]
5085 Nature is both form and matter [Aristotle]
5092 Change is the basis of nature [Aristotle]
5113 Nothing natural is disorderly [Aristotle]
1740 Nature does nothing in vain [Aristotle]
632 Why are only some things destructible? [Aristotle]
3556 Stoicism is determinist, physical,teleological [Stoic school]
5716 Nature works without the aid of gods [Lucretius]
2652 Is nature an irrational source of movement? [Cicero]
18456 Real existence is unified, without size [Porphyry]
19676 Nature is devoid of thought [Descartes]
15987 Physics is just geometry and maths [Descartes]
17190 We easily think of nature as one individual [Spinoza]
15997 It is not worth even trying to grasp nature [Locke]
19429 Nature aims for the best with least effort [Leibniz]
22052 Is nature just necessary laws? [Bowie]
8256 Nature is the realm of law [Kant]
22053 We need to unite humanity and nature [Kant]
3779 Unnatural just means infrequent [Bentham]
19595 Nature is a whole; its parts are obscure [Novalis]
22065 Fichte reduces nature to a lifeless immobility [Schlegel,F]
4347 Actions aren't natural when willed [Hegel]
22057 Unite productivities of nature and mind [Schelling]
22031 Organisms are central to nature [Schelling]
4179 Nature is essentially the will to life [Schopenhauer]
17649 One world and many are the same thing [Goodman]
15822 Nature rests on physical necessity [Chisholm]
17305 The fundamental is the totality [Schaffer,J]
7478 Philosophers invented the concept of 'nature' [Watson]
22198 Old motion is either circular or linear [Gorham]

2. Natural Purpose

understanding things by their aims
a. Final purpose
631 Basic purpose must be for its own sake [Anaxagoras]
5995 Cosmology has a teleological explanation [Diogenes of Apollonia]
275 We exist for the sake of the cosmos [Plato]
5089 Is growth of damp crops a coincidence? [Aristotle]
394 Everything natural has a purpose [Aristotle]
396 There is a goal, not just endless movement [Aristotle]
2809 The purpose of plants and animals is for man [Aristotle]
626 All things have a single purpose [Aristotle]

20812 All in the cosmos is for something [Chrysippus]
2280 Final causes are quite useless in physics [Descartes]
15963 Science has sought the laws of God [Alexander,P]

b. Limited purposes

5086 A thing's nature is its end and purpose [Aristotle]
5087 In one sense, we ourselves are ends [Aristotle]
5091 Predictable events have a purpose [Aristotle]
2684 Teleological description or explanation? [Irwin]
5227 A thing's end determines its nature [Aristotle]
5866 Order your life around some end [Aristotle]
2800 One purpose is better than many [Aristotle]
4826 Final causes are imaginary [Spinoza]
19376 Final cause explains parts of machines [Leibniz]
2195 Our knowledge of nature will always be limited [Hume]
5591 Reason assumes the purpose of living organs [Kant]
18237 With men creation would lack purpose [Kant]
4422 The end is and is not the goal [Nietzsche]
7176 'Purpose' is a tiny part of the wasted energy [Nietzsche]
7368 Without interests, no purposes or functions [Dennett]
6538 Teleology should come in degrees [Lycan]
21045 Social thinking needs teleology [Sandel]

c. Purpose denied

5990 Theophrastus rejected teleology [Theophrastus]
5878 Purposes are natural or distorted or unnatural [Aristotle]
12044 Epicurus denied purpose in nature [Epicurus]
12125 Teleology blocks seeking out causes [Bacon]
12730 We will ignore final causes [Descartes]
1587 Spinoza is firmly opposed to any teleology [Roochnik]
1588 Spinoza sees no innate purpose in eyes [Roochnik]
12731 We imagine final causes [Spinoza]
7648 The sun and rain weren't made for us [La Mettrie]
7195 If there is an end, we should have reached it [Nietzsche]
2905 'Purpose' is a human invention [Nietzsche]
5308 Genetic history dictates our only purpose [Wilson,EO]
3504 Chemistry entirely explains plant behaviour [Searle]
5501 Explain biological teleology causally? [Lycan]

3. Natural Function

what components of nature are meant to do

2094 Function is unique or superior ability [Plato]
5108 Are events unnatural if they happen by force? [Aristotle]
398 Things exist because of their function [Aristotle]
5873 Each thing's function is its end [Aristotle]
15772 A thing's active function is its end [Aristotle]
3505 Function is entirely relative to our desires [Searle]
10431 Things have thwarted functions [Sainsbury]
14387 Functions are causes of thing's existence? [Leuridan]

4. Mathematical Nature

mathematics is the essence of reality

553 Pythagoreans see maths as basic to all [Pythagoras]
554 Plato says things participate in numbers [Pythagoras]
375 Movement can be numerical, like music [Pythagoras]
638 Pythagoreans defined justice numerically [Pythagoras]
644 Pythagoreans say everything is numbers [Pythagoras]
1518 Everything is knowable through numbers [Philolaus]
1519 Only numbers can make an orderly universe [Philolaus]
473 Number & harmony are limited and always true [Philolaus]
17858 The whole universe is made of numbers [Aristotle]
1517 The tektraktys embodies natural harmony [Sext.Emiricus]
3645 Maths is essential to understand nature [Galileo]
19356 Minds count the vibrations in music [Leibniz]
19592 The basic relations of nature are musical [Novalis]

5. Infinite in Nature

time or space or matter could be infinite

8659 Gods are eternal, humans transient [Anon (Gilg)]
1748 The universe is boundless [Archelaus]
5093 The continuous is infinitely divisible [Aristotle]
5095 Imagination says the heavens are infinite [Aristotle]
8660 Actual infinity is incoherent [Aristotle]
14032 Nothing could give a limit to totality [Epicurus]
14033 Unlimited void implies unlimited bodies [Epicurus]
5704 There can be no centre in infinity [Lucretius]
5703 Nothing could exist to limit the universe [Lucretius]
4821 Some infinities are bigger than others [Spinoza]
18519 Infinite electrons are expendable? [Heil]
9635 No small or large physical infinities [Brown,JR]

20469 The infinite is our ignorance, not reality [Rovelli]

6. Early Matter Theories

ancient views on basic solid stuff

a. Greek matter

16762 Matter desires form [Aristotle]
13216 Matter is the formed limit of points [Aristotle]
17994 Matter is the substratum for hot and cold [Aristotle]
12058 Aristotelain matter transforms [Aristotle]
16590 Matter is indeterminate and non-particular [Aristotle]
10955 Matter is perceptible or intelligible [Aristotle]
601 Matter is the constant substance in change [Aristotle]
12299 Aristotle's matter is hierarchical [Aristotle]
12001 Matter is a lesser substance [Aristotle]
16624 Prime matter is a human invention [Bacon]
14265 Abstract definitions might contain matter [Fine,K]

b. Prime matter

15771 Primary matter is basic and lacks identity [Aristotle]
12868 Matter for change, or for properties? [Simons]
16099 God top, prime matter bottom [Aristotle]
15954 Fix elements needed prime matter? [Aristotle]
16589 Prime matter has indeterminate existence [Auriol]
16571 Prime matter is exceptionally obscure [Zabarella]
16591 Prime matter is nothing but its parts [Vanini]
16600 Prime matter is body minus qualities [Hobbes]
19399 Prime matter at rest is nothing [Leibniz]
17006 Prime matter has no place in Aristotle [Gill,ML]
16093 Prime matter is pure potential [Gill,ML]

c. Ultimate substances

1494 Thales thought water the first principle [Thales]
1497 Transformed air is the basis of natural things [Anaximenes]
614 From time to time everything becomes fire [Heraclitus]
550 Anaxagoras thought the basics were infinite [Anaxagoras]
21383 Homoömeries are the ultimates of matter [Anaxagoras]
484 Everything is a variation of one thing [Diogenes of Apollonia]
488 The air is ubiquitous and divine [Diogenes of Apollonia]
13224 There can't be one multi-faceted element [Aristotle]
17177 In nature there is just one infinite substance [Spinoza]
6421 Newton uses space, time, matter and force [Newton]

d. The unlimited

13222 The Boundless must have a contrary [Aristotle]
1495 The boundless is the first principle of things [Anaximander]
404 Reality is the unlimited moving in a cycle [Anaximander]
405 The unlimited is eternal and unchanging [Anaximander]
469 Existence combines the Limited and Unlimited [Philolaus]
225 The unlimited has no form [Plato]

20461 QM merges particles and fields [Rovelli]

e. The One

1640 Xenophanes began the idea that all is one [Xenophanes]
424 All things are one [Heraclitus]
5081 Internal movement within the One? [Aristotle]
555 Unity of the cosmos won't explain movement [Aristotle]
1509 Endless division culminates in nothingness [Parmenides]
20900 Motion needs void, which is non-existent [Parmenides]
226 The one is without any kind of motion [Parmenides]
1505 All is one to reason, but plural to the senses [Aristotle]
453 Reason requires that reality be spherical [Parmenides]
21823 'Friendship' is the One, and is bodiless [Empedocles]
2062 The One can only move spatially, or alter [Plato]
231 Varied things partake of the one [Plato]
233 The one cannot relate to other things [Plato]
616 If the origin was one, why are there now many? [Aristotle]
21814 How does the One produce multiplicity? [Plotinus]
21816 The One produces Nous, which produces soul [Plotinus]
21815 The unmoving One creates by radiation [Plotinus]
6406 Relations in plurality imply a superior unity [Bradley]
17692 We can't deduce the phenomena from the One [Armstrong]
12246 What unifies the One? [Oderberg]

f. Ancient elements

7992 Nature has eight visible forms [Anon (Bhag)]
17539 Heraclitus is right, with 'energy' for 'fire' [Heraclitus]
5096 Everything is fire at some time [Heraclitus]
3054 Fire is transformed to water and earth [Heraclitus]
1792 Fire creates, and earth is created [Parmenides]
13208 Not earth etc. but homoömeries are elements [Anaxagoras]
2680 Empedocles named six elements altogether [Empedocles]

6002 Bone is a ratio of three elements [Empedocles]
13207 Fire, Water, Air and Earth are elements [Empedocles]
13218 How do elements come-to-be? [Aristotle]
13225 Do Love and Strife have different effects? [Aristotle]
459 Elements are changed by Love and Hate [Empedocles]
460 Elements are eternal, and cannot disappear [Empedocles]
486 Life must be made of what it grows from [Diogenes of Apollonia]
485 Things must be the same because they mix [Diogenes of Apollon]
17464 Why do elements ever separate? [Weisberg/Needham/Hendry]
16102 Aether moves in circles and is imperishable [Aristotle]
17463 Elements are the limits of analysis [Aristotle]
16594 Elements must change into one another [Aristotle]
13223 The four elements have elementary qualities [Aristotle]
16098 Elements are basic, not prime matter [Aristotle]
20828 Fire is a separate element from the others [Chrysippus]
21403 The logos is 'pneuma' - air and fire [Chrysippus]
5975 Earth,air,fire and water are primary elements [Chrysippus]
16570 Elements begin and end all bodies [Albert of Saxony]
16569 Hot, cold, wet, dry need explanation [Descartes]
12707 Elements are atomic monads [Leibniz]
17465 Lavoisier has four types of earth [Weisberg/Needham/Hendry]

g. Atomism

17542 Full/Void replaces Being/Non-Being [Democritus]
5947 Pain is just as real as atoms [Democritus]
13219 Why don't touching atoms coalesce? [Aristotle]
1525 Being varies in shape, arrangement & position [Democritus]
1533 Infinite atoms explain varied appearances [Democritus]
20898 Atoms have many other shapes [Democritus]
20899 Atoms cluster, until dispersed [Democritus]
20908 There could be an atom the size of the world [Democritus]
1527 Atoms are better than nothings or infinity [Democritus]
20909 Qualities arise when atoms meet [Democritus]
493 Appearances are convention; atoms are real [Democritus]
1536 Are the surfaces of a cut cone equal or not? [Democritus]
325 Physical reality is built of invisible units [Plato]
13210 Wood appears endlessly divisible [Aristotle]
13211 Does endless division reach nothingness? [Aristotle]
13220 Bodies are divisible through and through [Aristotle]
14034 We can't know all the types of atom [Epicurus]
14035 Atoms are minimal, and colour is arrangement [Epicurus]
14038 Endless division leads to non-existence [Epicurus]
20907 Atoms have size and shape (plus weight) [Epicurus]
21669 Atom swerve is clearly uncaused [Cicero]
21680 What causes various atomic swerves? [Cicero]
5693 Everything in nature is made of atoms [Lucretius]
5701 All infinitely divisible objects are the same [Lucretius]
5708 Atoms can swerve for no reason [Lucretius]
5950 How do atoms produce qualities? [Plutarch]
20919 Can weightless things compose weight? [Alexander]
16593 No natural force can divide an atom [Gassendi]
16729 How can atoms make colour and smell? [Gassendi]
15952 Corpuscles are intrinsically explanatory [Boyle]
15955 I subscribe to the corpuscular theory [Leibniz]
12728 Atoms need elasticity, and hence parts [Leibniz]
19374 Matter seems endlessly divisible [Leibniz]
12759 There only atoms of substance [Leibniz]
2102 All things differ, so there can't be atoms [Leibniz]
2105 Atomism limits the possibilities of creation [Leibniz]
2106 Monads have no parts or extensions [Leibniz]
12705 Extreme hardness distinguishes atoms [Garber]
6156 In the 17th century atoms went mathematical [Rowlands]
16609 Causation is mechanical; qualities are tiny [Pasnau]

7. Later Matter Theories

theories of the years 1600-1750

a. Early Modern matter

13470 Mass is central to matter [Newton]
15978 Matter is a body minus spatial aspects [Locke]
7560 Leibniz tried to reconcile bodies and monads [Jolley]
12718 There is primary and secondary matter [Leibniz]
19416 Matter contains life, but isn't animated [Leibniz]
19422 Matter is suffused with organic bodies [Leibniz]
19436 Primary matter is passive, secondary active [Leibniz]
6731 Matter can't affect mind, so is irrelevant [Berkeley]
14301 The definition of matter is circular [Hume]
16603 17th matter becomes an object of study [Pasnau]

b. Corpuscles

16675 Substances all have spread parts [William of Ockham]
16707 Hot and cold are corpuscle motion [Beeckman]
16731 Colour comes from the matter itself [Digby]
15972 There are no forces in corpuscular theory [Boyle]
17020 We can sum the attractions of a body's parts [Newton]
16592 Corpuscles need not be atoms [Pasnau]
16750 No corpuscular substance boundaries? [Pasnau]

c. Matter as extension

16687 Bodies are three-dimensional substances [Aquinas]
6518 If matter is geometry, it needs a filler [Robinson,H]
16601 Matter is merely extended in space [Descartes]
16684 Impenetrability belongs to extension [Descartes]
16683 Body is resistance, not extension [Leibniz]
13185 Mere matter doesn't explain laws of motion [Leibniz]
5615 Matter is extended and impenetrable [Kant]
6519 Matter cannot be explained as 'solidity' [Robinson,H]

B. Natural Kinds

1. Natural Kinds

general ideas about natural kinds

10952 A 'mule' is just a combination of kinds [Aristotle]
19244 Repeating chemistry experiments is pointless [Peirce]
7375 Quine didn't want essential natural kinds [Quine]
16935 Without similarity degrees kinds won't nest [Quine]
16936 Comparative similarity will nest kinds [Quine]
5472 Three categories of natural kinds [Ellis]
6613 Natural kinds: objects, processes, properties [Ellis]
15886 Science assumes hierarchies of natural kinds [Harré]
17371 Explanatoriness of kinds comes in degrees [Devitt]
17381 History for phylogenetics, splits for cladism [Dupré]
17385 Kinds are abstract, and hence inactive [Dupré]
6767 Rubies and sapphires are both corundum [Bird]
6768 Tin is 21 isotopes, not one natural kind [Bird]
6771 Natural kinds may overlap, or be sub-kinds [Bird]
6770 Random collections explain nothing [Bird]
6776 Natural kinds are those used in induction [Bird]
17394 Natural kinds are nature's own classes [Scerri]
17421 Are periodic table groups natural kinds? [Scerri]
14504 'Rigid' natural kinds are too stable [Koslicki]
18613 Artifacts like tools can be natural kinds [Machinery]

2. Defining Kinds

what exactly is a natural kind?

8153 Know one gold nugget, you know it all [Anon (Upan)]
12265 All water is roughly the same [Aristotle]
19761 We have too few names for natural kinds [Rousseau]
6939 Copper is always the same, unlike brass [Peirce]
12681 There are natural kinds of processes [Ellis]
15798 Kinds are arrangements of dispositions [Fetzer]
6170 Natural kinds are defined by their essences [Rowlands]
6773 Natural kinds are universals in laws [Bird]
17478 Kinds show no change when mixed [Hendry]

3. Knowing Kinds

how and how far we can know natural kinds

15170 Species rest on nominal, nor real, essence [Locke]
16937 Mere resemblance won't give kinds [Quine]
13583 There might be uninstantiated natural kinds [Ellis]
11860 Laws individuate natural kinds [Wiggins]
15693 One sample? For gold yes, for tree height no! [Gelman]
6769 Maybe only physicists know natural kinds [Bird]
6774 Selection predicts ability to spot kinds [Bird]
14956 Explanation by kinds is just stability [Ladyman/Ross]
13285 Natural kinds support inductive inferences [Koslicki]

4. Source of Kinds

what underlies the divisions of natural kinds

15660 Logos gives all natures and sources [Heraclitus]
15993 A total regularity indicates a hidden law [Locke]
11191 Hidden structure determines a natural kind [Putnam]
13574 Natural kinds rest on essences [Ellis]
5471 Essentialists say natural kinds underpin laws [Ellis]
12680 Natural kinds all the way down [Ellis]
15150 Electron properties don't just 'cluster' [Chakravartty]
15149 Properties tend to cluster together [Boyd]
14344 Kinds resemble because we choose them that way [Mumford]
15146 'Cluster kinds' do not have essences [Chakravartty]

14957 Natural kinds are just patterns in nature [Ladyman/Ross]
13287 Intrinsic or relational species concepts [Koslicki]
15641 A kind is fixed by essential properties? [Eagle]

5. Reference to Natural Kinds

how language terms refer to natural kinds

16782 Adam named all the kinds of creatures [Anon (Tor)]
11904 Predicates, not terms, for kinds [Putnam]
17507 Kinds have strong and weak stereotypes [Putnam]
2342 'Water' is a natural kind, but not 'H2O' [Putnam]
8873 Microstructure is irrelevant to 'water' [Davidson]
17056 Natural kind terms are like proper names [Kripke]
4963 Reference is contingent, meaning necessary [Kripke]
18891 Direct reference can't block anti-essentialism [Salmon,N]
15701 Nouns, rather than predicates, invoke kinds [Gelman]
6764 Nominal essence is naming features [Bird]
6766 Jadeite and nephrite look identical but aren't [Bird]
6808 Scientific reference is by explanatory role [Bird]
13284 Are vernacular classes real natural kinds? [Koslicki]

6. Necessity of Kinds

natural kinds in some way have to be as they are

12375 Intrinsic properties are necessary ones [Aristotle]
5446 Members of natural kinds are identical [Ellis]
5480 The world is a natural kind, with laws [Ellis]
17053 Could non-79 elements be gold? [Kripke]
4964 'Cats are animals' is a necessary truth [Kripke]
15292 Kinds are what produce natural necessities [Harré/Madden]
11907 Necessary kinds, contingent instantiations? [Mackie,P]

7. Critique of Kinds

objections to dividing nature into 'kinds'

10398 Natural kinds are just resemblance collections [Abelard]
13575 Only superficial kinds have blurred borders [Ellis]
16954 'Natural kinds' actually differ greatly [Dummett]
6765 Natural kinds don't need nominal essences [Kripke]
15299 Species are too inconstant to be kinds [Harré/Madden]
17375 Human aims decide the natural kinds [Dupré]
17379 Vegetables have much vaguer species [Dupré]
17380 Wales may count as fish [Dupré]
17382 Are garlic and onions distinct? [Dupré]
17384 Even atoms of an element differ slightly [Dupré]
17387 Ecologists prefer niche to genealogy [Dupré]
10351 Natural kinds are social institutions [Kusch]

C. Causation

1. Causation

general comments on the nature of causation

367 Mind produces order and causation [Anaxagoras]
327 Causes are either necessary or divine [Plato]
17252 Acting on a thing is changing its properties [Hobbes]
4772 Events must be types to infer causation [Hume]
2245 A priori reasoning can lead to nonsense [Hume]
15614 We can't grasp reality through causation [Hegel]
15247 Causation always involves perception [Whitehead]
8436 Is causation conditional or counterfactual? [Bennett]
8441 Delay a fire won't cause it; hasten it might [Bennett]
10371 Explanation, not causation, needs descriptions [Davidson]
8430 Causal statements have five uses [Kim]
15562 'Causation' derives from particular causes [Lewis]
8324 Explain causal laws and relations, and reality [Sosa/Tooley]
8404 Four relations of single and general causes [Field,H]
3890 A cause was any valid explanation [Scruton]
19068 Causation can potentially explain change [Mumford]
4399 Causes have an obvious role in events [Psillos]
4400 Cause is regularities or intrinsic relations [Psillos]
4403 Causation precedes explanation [Psillos]
10359 There are six problems about causation [Schaffer,J]
10372 Maybe causation is not transitive [Schaffer,J]
10374 There are ten theories of causal connection [Schaffer,J]
17307 Treat causation by equations and variables [Schaffer,J]
14566 Causation by absence is not real causation [Mumford/Anjum]
14577 Examples show causation isn't transitive [Mumford/Anjum]

2. Types of cause

categories of links between successive events

13156 A cause isn't its background conditions [Plato]
11252 Form explains identity of some matter [Aristotle]
11253 Material Cause is a form, not matter [Aristotle]

13107 Cause in own right, and cause coincidentally [Aristotle]
5219 Nature, necessity and chance are causes [Aristotle]
19425 The schools treat Four Causes obscurely [Leibniz]
8367 Causation is singular not constant conjunction [Ducasse]
15823 There are 'agent' and 'event' causation [Chisholm]
17689 Absences are effects, but not causes? [Armstrong]
8435 Are causal relata events or facts? [Bennett]
15253 Causes plus usual effects are 'powers' [Harré/Madden]
15555 General and particular causes are similar [Lewis]
11960 Singular causation is prior to general [Molnar]
8389 Three main distinctions in causation [Tooley]
8388 Four basic theories of causation [Tooley]
4071 Cause is counterfactual, probable, or energy [Crane]
4789 There are three divisions of causal theories [Psillos]
17528 Cause stimulates and shows dispositions [Bird]
16722 Causation is primary quality change [Pasnau]

3. Final causes

Greek view of ultimate aim as the cause

8332 Material, Formal, Efficient and Final causes [Aristotle]
4850 Final cause is just human desire [Spinoza]
5059 Wisdom links efficient and final causes [Leibniz]
4579 We can't know final causes [Hume]
14865 We don't know the nature of any causes [Nietzsche]

4. Naturalised causation

causation explained in terms of natural phenomena

561 Is causation physical or non-physical? [Aristotle]
1894 Are causes physical or not? [Sext. Empiricus]
7563 Causation is an influx of properties [Suárez]
12497 Causes are active substances [Locke]
8412 Causation is process-modification [Salmon]
18380 Negative causation: positives, plus laws? [Armstrong]
8326 Causation is just transfer of energy [Fair]
10379 Not energy flow, but its counterfactuals [Fair]
2542 Physical causation is energy transfer [McGinn]
11937 Analyse causation in terms of powers [Molnar]
8327 Energy transfer seems to involve causation [Sosa/Tooley]
8328 Past electrons cause present ones [Sosa/Tooley]
8416 Four objections to causal reductionism [Tooley]
8387 Causes have effects because of properties [Crane]
4787 Causation is exchange of conserved quantities [Dowe]
14586 Causation just transfers conserved quantities [Dowe]
9493 Powers explain causation, not vice versa [Bird]
10366 Absences cause, so cause isn't in nature [Schaffer,J]
10377 Processes are too disjointed to be causal [Schaffer,J]
10378 A process's connection may not be causal [Schaffer,J]
10382 A process needs causation to explain it [Schaffer,J]
17494 Analyse causation in terms of mechanisms [Glennan]
14563 Causation is the passing around of powers [Mumford/Anjum]

5. Direction of causation

explain the past-to-future direction of causes

5861 Do events cause what follow them? [Aristotle]
11207 Causes can exist without effects [Aquinas]
8410 Derive time from asymmetry in causation [Reichenbach]
8363 p is a cause if p-changes make q-changes [Wright,GHv]
8364 Rain controls floods, not vice versa [Wright,GHv]
8351 Causes are easier spotted than effects [Anscombe]
8413 Interaction simultaneous, propagation directed [Salmon]
15278 Cause and effect can occur together [Harré/Madden]
8405 Causation theories should explain direction [Lewis]
8427 Assuming causal direction goes too far [Lewis]
8433 Prior signs are few, subsequent signs many [Lewis]
8393 Which is the real direction: causation or time? [Tooley]
8400 Earlier events explain later events [Field,H]
8401 Unlike causation, laws have no direction [Field,H]
8402 Add cause to physics to explain directionality [Field,H]
4210 We can't rule out backward causes a priori [Lowe]
10375 Causal direction may not be time direction [Schaffer,J]
10390 Four reasons why causation is not temporal [Schaffer,J]
10389 Two reasons identify causal order with time [Schaffer,J]

6. Causation as primitive

causation is an unanalysable basis of nature

4777 The concept of cause is built into language [Anscombe]
15246 Causation has no intrinsic nature [Harré/Madden]
10380 Causation is primitive if all accounts need it [Schaffer,J]
10385 Three objections to primitivist causation [Schaffer,J]

14587 Causation is primitive, unreducible [Mumford/Anjum]

7. Eliminating causation

scepticism about the whole idea of causation

- 3062 Cause is merely relative, or impossible [Pyrrho]
1896 Without cause everything produces everything [Sext.Empiricus]
1897 Cause and effect have a circular relationship [Sext.Empiricus]
1898 Cause is a complete illusion [Sext.Empiricus]
8341 Hume never denies causation [Hume]
12113 The search for causes is futile [Comte]
4542 Science has blurred cause and effect [Nietzsche]
14172 Points imply other points, non-causally [Russell]
14175 Just use inferences, instead of 'cause' [Russell]
4396 The law of causality is not needed [Russell]
8376 Cause/event contiguity creates problems [Russell]
11954 Use powers to analyse causation [Molnar]
20366 Cause is a continuum, not two events [Richardson]
15126 Cause is only pattern generalisation? [Hawthorne]
10388 Many explanations need causation [Schaffer,J]
10387 Causation is in science, not in equations [Schaffer,J]
20650 Uncertainty makes causation unmeasurable [Watson]
14954 Basic physics may not need causation [Ladyman/Ross]

8. Particular Causation

causation as essentially about single events

a. Observation of causation

- 4553 Causation is deduced from supposed free will [Nietzsche]
8372 Naming causes needs regularity, not seeing them [Ducasse]
8366 The notion of cause depends on agency [Wright,GHv]
8362 Experiment turns regularity into causation [Wright,GHv]
8337 One-off a hallmark of mental causation [Mackie]
3535 Observable causes are epiphenomena [Kim]
15213 Causation rests on powerful particulars [Harré/Madden]
8390 Bodily pressure and action show causation [Tooley]
18526 Focus on causings, not on laws and sequences [Heil]
10386 We experience or infer primitive causation [Schaffer,J]
10384 Causation is primitive is indiscernible [Schaffer,J]

b. Causal relata

- 8344 Is Hume's causation by quality or event? [Hume]
14560 Simultaneous cause-effect: ball on a pillow [Kant]
10370 Causal relata are spacetime regions [Quine]
3445 Causation is a relation of events or states [Chisholm]
10363 Causal relata are relative to description [Anscombe]
15485 Manifestations, not cause-then-effect [Martin,CB]
15491 Explain cause by disposition/manifestation [Martin,CB]
8411 Causation relates processes, not events [Salmon]
4784 Causation is about processes, not events [Salmon]
10364 Facts aren't in the world, so can't cause [Bennett]
8342 Mackie has a vague concept of events [Kim]
8403 Causes are facts or unspecific events [Field,H]
3524 Cause is between events, or their descriptions [Davidson]
3526 Causal explanation depends on descriptions [Davidson]
8542 Mention properties, as well as events [Shoemaker]
4785 Causal statements relate facts [Mellor]
7853 Causes need events, or facts, or states [Papineau]
7857 Causes are particulars, or instantiate them [Papineau]
8516 Causes have events and conditions [Campbell,K]
8517 Causal conditions are tropes [Campbell,K]
4076 Properties make a difference in a situation [Crane]
8317 Causes need states of objects, not affairs [Lowe]
4209 Fact causation, or event causation? [Lowe]
4215 Only substances have causal powers [Lowe]
4790 Intrinsic causality depends on features of c&e [Psillos]
10361 Events are more coarse-grained than facts [Schaffer,J]
10360 Seven candidates for causal relata [Schaffer,J]
10362 Possible there are three or four causal relata [Schaffer,J]
10368 Relata are neither facts nor events [Schaffer,J]
10383 Defining the relata needs causation! [Schaffer,J]
20083 Causation is inputs into processes [Stout,R]
14533 Causation is a single unfolding process [Mumford/Anjum]
14558 Causation is simultaneous, not instant [Mumford/Anjum]
14559 Three causal ingredients, two, or one? [Mumford/Anjum]
14565 Causal processes take time [Mumford/Anjum]

c. Conditions of causation

- 588 Causation works in two directions [Aristotle]
1895 Divide causes by the contribution they make [Sext.Empiricus]
2272 Effect cannot be greater than its cause [Descartes]

- 17254 Effects need sufficient and necessary causes [Hobbes]
8382 Constant conjunction is necessary & sufficient [Hume]
8345 A cause is all the preceding conditions [Mill]
8369 There are four types of causal relation [Ducasse]
8373 Identifying causes depends on our interests [Ducasse]
8360 Conditions for causation need analysis [Wright,GHv]
8350 Causation is usually explained by conditions [Anscombe]
8343 Necessity doesn't suit individual events [Kim]
8385 A cause is part of a sufficient set [Mackie]
8335 Necessary's counterfactual, sufficient factual [Mackie]
8336 The INUS account interprets singular causation [Mackie]
8346 Full descriptions show sufficiency of cause [Davidson]
15217 Efficient cause is stimulus minus restraint [Harré/Madden]
8330 Are causes sufficient, necessary, or both? [Sosa/Tooley]
8407 Are the total necessities sufficient? [Sanford]
4211 Three types of causal overdetermination [Lowe]

d. Selecting the cause

- 10391 We select cause from conditions by whim [Mill]
14547 The cause is the total of all preconditions [Mill]
8370 Causes are adjacent in time and space [Ducasse]
17645 Alien's think a fire's cause is the oxygen! [Putnam]
8333 A cause is an INUS condition [Mackie]
15277 The cause is the stimulus or the release [Harré/Madden]
10392 Picking out 'the' cause is discrimination [Lewis]
8419 Causes are members of sufficient sets [Lewis]
15552 We only pick 'the' cause for pragmatic reasons [Lewis]
15551 Causes can't be carved correctly [Lewis]
10393 If 'the' cause is predictable, it has a basis [Schaffer,J]
10394 Causation depends on cause-selection [Schaffer,J]
14567 Picking one cause is epistemic or pragmatic [Mumford/Anjum]

e. Probabilistic causation

- 8409 We all use probabilistic causal concepts [Salmon]
8567 Causes make effects more probable [Mellor]
8408 Probabilistic causes makes effects more likely [Mellor]
16175 Probable outcomes are interfered with [Cartwright,N]
8418 Quantum physics laws are probabilistic [Tooley]
8392 Probable laws allow all effects or none [Tooley]
8399 Actual causes may not be very efficacious [Tooley]
18527 Probabilistic causation is not just weaker! [Heil]
10376 Actual causes may make an event less likely [Schaffer,J]
10381 Probability causation needs it as primitive [Schaffer,J]

9. General Causation

nature of causation in patterns of repeated events

a. Constant conjunction

- 2364 Cause is just memory of linked events [Hobbes]
6730 Causation is settled laws, not necessity [Berkeley]
3662 Conjunction is all we know of causation [Hume]
2193 All causation is seen by constant conjunction [Hume]
4771 Causation is extrinsic to events [Psillos]
5194 Hume can't cover undiscovered laws [Ayer]
2221 Cause is linked objects or linked thoughts [Hume]
2234 Conjunction of species is causation [Hume]
8383 Day and night don't cause one another [Reid]
5545 Appearances can't show necessity in causes [Kant]
8377 Causation is invariable succession of facts [Mill]
15250 Impressions don't reveal a repetition [Whitehead]
8380 One failed effect won't disprove causation [Russell]
8371 Recurrence only concerns law, not causation [Ducasse]
16946 Invariance needs general terms in descriptions [Quine]
8598 A spread out conjunction is not a cause [Shoemaker]
8421 Regularity doesn't ensure normal causation [Lewis]
8391 Laws without instances aren't supervenient [Tooley]
8384 Regularity uses other events as explanation [Crane]
8338 Phenomenalism implies regularity causation [Strawson,G]
14537 Conjunction and causation can come apart [Mumford/Anjum]
16527 Causation - we all thought we knew it... [Sommers,W]
12400 Cries the maid: ... [Sommers,W]

b. Nomological causation

- 634 Forms and numbers can't cause things [Aristotle]
9755 Lawless causation is a contradiction [Kant]
17709 Causation is relation by laws [Kant]
5562 Causation makes experience from appearance [Kant]
8374 Our generalising about causes is pragmatic [Ducasse]
8395 Mackie's general and singular causes differ [Mackie]
8334 Sometimes 'a' cause is 'the' cause [Mackie]

- 4778 It is causal only if it falls under a law [Davidson]
3962 Causation follows strict unconditional laws [Davidson]
3401 Causation must instantiate a law [Kim]
8442 What law explains causing a table's creation? [Sosa]
2962 Causation comes from reason, not perception [Lockwood]
8325 Most favour causal laws; a few are singularist [Sosa/Tooley]
8394 Causal laws don't explain its direction [Tooley]
8398 Physical processes will differ across worlds [Tooley]
7016 Is causation based on laws and events? [Heil]
4213 Causation may be instances of laws [Lowe]
3528 Causality may have to involve a law [Maslin]
9430 Natural necessity might not be nomological [Mumford]
4402 Reduce causation to logic-plus-laws? [Psillos]
6753 Laws are more basic than causes [Bird]
9494 The universals in causation imply laws [Bird]

c. Counterfactual causation

- 8422 If not first object, then no second object [Hume]
15468 Counterfactuals loosely indicate dispositions [Martin,CB]
8437 Counterfactual theory needs a series of events [Bennett]
8438 Counterfactual causation implies essences [Bennett]
8396 Not all counterfactuals concern causation [Kim]
8429 Counterfactuals express four other relations [Kim]
8428 Counterfactuals express more than causation [Kim]
17524 Cause plus counterfactual plus ancestral [Lewis]
17525 Counterfactual causes are the necessary ones [Lewis]
8397 Counterfactuals imply all laws are causal [Tooley]
8423 Counterfactual analysis covers particulars [Lewis]
8426 e1 causes e2 if there is a causal chain [Lewis]
8608 Different present means different past? [Lewis]
8584 Causal counterfactuals must avoid backtracking [Lewis]
9659 No cause, no effect, at a closest world [Lewis]
15553 Causation is counterfactual dependence [Lewis]
8432 Analyse counterfactuals using causation! [Horwich]
11961 Causation explains the counterfactuals [Molnar]
16847 Counterfactual: necessary not sufficient [Lipton]
16215 Causation is just some counterfactuals? [Hawley]
9445 Abandon counterfactuals; take causes literally [Mumford]
4774 Counterfactual claims are more than regularity [Psillos]
16248 Counterfactual evaluation is partly pragmatic [Maudlin]
16250 Counterfactual view is psychologically wrong [Maudlin]
16267 Causation produces counterfactuals assent [Maudlin]
16268 Some other cause might give the effect [Maudlin]
16269 Counterfactuals are two-way, which is bad [Maudlin]
17526 Counterfactuals blur cause and condition [Bird]
14573 Causation and false counterfactual is possible [Mumford/Anjum]
14572 Priority: counterfactual dependence or cause? [Mumford/Anjum]
14574 Counterfactual dependence without causation? [Mumford/Anjum]

d. Causal necessity

- 14543 Effects necessarily follow causes [Aristotle]
1859 Even a sufficient cause can be interrupted [Aquinas]
17235 Cause is everything necessitating the effect [Hobbes]
4815 Effects necessarily follow causes [Spinoza]
12726 True causes have necessary connections [Malebranche]
2594 In true causes we perceive necessity [Malebranche]
2117 The success of induction has a constant basis [Leibniz]
12702 Full known effects imply their causes [Leibniz]
19274 Hume assumes mental necessities [Kripke]
20705 That events could be uncaused is absurd [Hume]
15249 How could a habit suggest a necessity? [Harré/Madden]
8339 Hume really believed in natural necessity [Hume]
2218 We can find no necessary connection in things [Hume]
5523 Causation obviously involves necessity [Kant]
14545 Causes produce effects unconditionally [Mill]
15251 Only animism or confusion sees a necessity [Ayer]
4798 Maybe causation is necessity [Armstrong]
5445 Objects are genuine causal agents [Ellis]
5463 Essentialist believe causation is necessary [Ellis]
5491 General causal accounts need natural kinds [Ellis]
3290 Water must boil when fully heated [Nagel]
4306 For rationalists, effects are deducible [Cottingham]
8444 Can a situation involve necessary causation? [Sosa]
8445 Necessitator may not cause necessitated [Sosa]
4212 Causation may be naturally necessary, no more [Lowe]
9443 Worldly necessity comes from properties [Mumford]
14539 Causes never necessitate effects [Mumford/Anjum]
14550 Some causes clearly necessitate nothing [Mumford/Anjum]

14546 Causes can be blocked, so aren't necessary [Mumford/Anjum]

D. Laws of Nature

1. Laws of Nature

nature and status of the regularities of nature

15863 My physics is designed to fit theism [Newton]

16746 Principles are the laws which form things [Newton]

12907 Possible worlds have their own laws [Leibniz]

13194 Laws entail the powers to follow them [Leibniz]

13177 Entelechy is a law-of-the-series [Leibniz]

5467 Nature only has passive powers [Euler]

14800 The laws imply uniformity - unlike the world! [Peirce]

19254 Have our laws of nature evolved? [Peirce]

14825 Religion sees nature as arbitrary acts [Nietzsche]

17633 The law of gravity has further consequences [Russell]

20638 Laws of nature are the same in all frames [Einstein]

17662 Laws of nature reveal the unobserved to us [Armstrong]

17682 A universe couldn't consist of mere laws [Armstrong]

13595 Laws are of the world, not in it [Ellis]

5442 Natural behaviour is imposed on things [Ellis]

5473 Natural laws copy hierarchical natural kinds [Ellis]

5474 Laws of nature tend to cover ideal facts [Ellis]

5475 Four basic problems with natural laws [Ellis]

15864 Science need both taxonomy and laws [Harré]

15865 Newton's 1st Law can't be demonstrated [Harré]

15727 Physics should list the natural properties [Lewis]

8581 Physics seeks laws, causes and properties [Lewis]

14581 Normative laws state natural behaviours [Lowe]

14338 Laws put events first, properties second [Mumford]

9444 What is the logical form of a law statement? [Mumford]

16242 Laws of nature are ontological bedrock [Maudlin]

16247 Indiscernible worlds, different laws? [Maudlin]

16272 Laws of nature say how things will evolve [Maudlin]

6762 Newton's laws are confirmed in combinations [Bird]

6763 Parapsychology offers no mechanisms [Bird]

6772 Existence requires laws [Bird]

9507 Laws are relations based on essences [Bird]

15151 Laws of properties, as well as of kinds [Chakravartty]

14902 Science may allow uninstantiated laws [Ladyman/Ross]

14346 Essentialism means strict laws of nature [Corry]

2. Types of Laws

possibility divisions of laws of nature into types

17549 Science has seven main theories [Heisenberg]

8365 Some laws are causal, others mere principles [Wright,GHv]

17690 Oaken, Iron and Steel laws of nature [Armstrong]

6616 Least action describes a global essence [Ellis]

15862 Four ways to derive a law [Harré]

15870 Laws of events, types or dispositions? [Harré]

15871 Laws cover the possible, or just the actual? [Harré]

3407 Strict laws, or ceteris paribus laws [Kim]

6781 The fundamental types of laws are false [Cartwright,N]

16166 Phenomenological, or theoretical (real) laws [Cartwright,N]

9488 Regular dispositions, property relations? [Bird]

3. Laws and Generalities

differences between general truths and real laws

4794 Predictions mark laws, not vice versa [Goodman]

17670 Can laws refer to non-existence bodies? [Armstrong]

12675 Laws of nature are behaviour descriptions [Ellis]

15799 Laws are generalised truths about dispositions [Fetzer]

4800 Only eliminative induction leads to laws [Cohen,LJ]

14339 We must explain generalities without laws [Mumford]

4793 Universal generalisations may not be laws [Psillos]

14382 Laws are pragmatic, depending on stability [Leuridan]

4. Regularities

laws are just patterns of regularity in causation

a. Regularity theory

8340 I don't know the cause of gravity [Newton]

15861 The laws are regularities of sensations [Berkeley]

4773 Mill's causation requires groups of causes [Mill]

4775 Cause is the common factor in varied cases [Mill]

4776 If no x then no y, then x causes y [Mill]

14806 A mechanical world has no whole account [Peirce]

14871 Laws are complex networks of relations [Nietzsche]

16942 Regularities seem hard to explain [Quine]

9410 Laws are natural patterns found in analysis [Feynman]

8582 Laws are unities of universals [Armstrong]

17671 It never happens, so it is impossible? [Armstrong]

8541 Explain causes, counterfactuals, probabilities [Armstrong]

8540 Sparse properties avoid the grue problem [Armstrong]

5460 A causal relation could occur just once [Ellis]

10412 Regularity laws cannot predict [Swoyer]

14340 Every sneeze is followed by a cough, somewhere [Mumford]

14341 Regularities of properties, instead of events? [Mumford]

9415 Would five identical conjunctions be enough? [Mumford]

9416 Regularities more likely with fewer instances [Mumford]

9431 Pure regularities are rare in practice [Mumford]

9441 If regularity doesn't govern, it won't explain [Mumford]

4397 Regularity is not sufficient for causation [Psillos]

4401 Regularities need not be laws of nature [Psillos]

4792 Cause is regularity based on non-causal facts [Psillos]

4801 Non-causal regularity is a predictor [Psillos]

16251 General laws must involve natural kinds [Maudlin]

6740 Is 'Uranium/Gold lumps are small' a law? [Bird]

6741 Remarkable uniformities can be coincidence [Bird]

6742 A law of nature might have no instances at all [Bird]

6743 No best fit, if laws are just their instances [Bird]

6744 What regularities in probabilistic laws? [Bird]

6746 Lots of laws, each with a few instances? [Bird]

6747 Regularity laws can't explain their instances [Bird]

6749 Instances must be bound for regularity [Bird]

6748 Parents link siblings, not their appearance [Bird]

6803 Regularities can't imply unobservables [Bird]

6801 Regularity may only be accidental or apparent [Bird]

9479 Essentialist laws are guaranteed regularities [Bird]

9496 Other hard diamonds don't explain this one [Bird]

14385 Strict regularity is rare in life sciences [Leuridan]

b. Best system theory

9417 Infer uniformities from minimum assumptions [Mill]

9418 Laws are the axioms of total knowledge [Ramsey]

9420 Laws are axioms of the simplest system [Ramsey]

9409 Laws axiomatize world history [Lewis]

9423 Strength and simplicity are subjective [Mumford]

9424 Several systems might tie as the 'best' [Mumford]

9419 Laws are axioms of the best deductive system [Lewis]

9425 Choose axioms where best theories intersect [Mumford]

8611 Laws are regularities in ideal systems [Lewis]

16179 Organisation and truth are quite different [Cartwright,N]

9421 Regularities derive from axiomatic laws [Mumford]

9422 Laws are in nature, not in its description [Mumford]

4796 A law is a coherent system of regularities [Psillos]

18854 Laws: theorems of the best account of reality [Rosen]

16270 If laws are regularities, there have to be law [Maudlin]

6745 Regularities are laws as part of a big system [Bird]

6802 Strange predicates make strange regularities [Bird]

5. Laws from Universals

laws seen as necessary relations between universals

8379 Causal law 'events' must be particulars [Russell]

16246 Make laws primitive, not universals? [Maudlin]

9480 Contingent necessity? Can it necessitate? [Bird]

17681 Laws of nature link properties together [Armstrong]

15876 Laws of nature are just property relations [Harré]

15093 Necessary laws relate causal properties [Shoemaker]

15237 Laws are just relations of qualities? [Harré/Madden]

14639 General qualities connect laws to individuals [McMichael]

9432 Laws are necessities between universals [Mumford]

9433 Uninstantiated laws seem to need universals [Mumford]

9473 Laws need universals for unity [Bird]

9484 Laws mustn't depend on instantiated universals [Bird]

19039 Dispositionalism dislikes A/T/D laws [Vetter]

6. Laws as Numerical

laws of nature expressed just in numerical terms

476 Numbers make the universe stable [Philolaus]

17008 You reveal ellipses just from gravitation [Newton]

17010 We want mathematical laws, not forms [Newton]

8656 Number laws are laws of laws of nature [Frege]

8381 Scientific laws rest on equations, not causes [Russell]

15125 We only know the mathematical laws [Hawthorne]

7. Strictness of Laws

whether laws are necessary, or their truth is qualified

17004 The laws of eternity are unbreakable [Lucretius]

16686 God creates laws, and our ideas of them [Descartes]

15820 Laws of nature are just physical necessities [Chisholm]

15860 Only necessities could be laws [Harré]

15867 Laws concern idealisations, not messy nature [Harré]

15872 Can there be local laws of nature? [Harré]

15238 Lawlikeness seems beyond analysis [Harré/Madden]

14349 No finks or antidotes? - rigid laws! [Burge]

3525 Strict laws make causation logically necessary [Maslin]

3527 Strict laws are exceptionless and closed [Maslin]

14575 Ceteris paribus clauses imply dispositions [Mumford/Anjum]

8. Scientific Essentialism

natural laws necessarily follow from essences of natural entities

a. Scientific essentialism

14049 We want to know the natures of things [Epicurus]

12118 Natural essences are supreme [Bacon]

12550 If we knew essences, we could predict [Locke]

11854 Maybe the power in things is God [Leibniz]

11856 Essence should predict qualities [Leibniz]

12994 Essence of gold gives its properties [Leibniz]

12808 'Gold' includes a real unknown essence [Leibniz]

8931 Science is movement of essences [Hegel]

9363 Classification gives law, essence, prediction [Lewis,C]

12307 Modern science is approaching essences [Copi]

11189 To lose dispositional essence is to cease [Marcus (Barcan)]

12175 Essences are ultimate explanations [Popper]

11192 Do diseases have a relational essence? [Putnam]

11190 By 'gold' Archimedes meant its essence [Putnam]

13566 Being a proton is having a role [Ellis]

13579 Essentialists must commit to processes [Ellis]

13581 Essences for explanation, not for identity [Ellis]

13594 Dispositions and categorical properties basic [Ellis]

5459 Dispositions are basic to physics [Ellis]

5461 Uranium is essentially protons and shell [Ellis]

6615 Species need genus, which affect essence [Ellis]

15951 Alchemists aimed for essences [Alexander,P]

12085 Reality is directional [Witt]

11959 Science works by accepting essences [Molnar]

9448 Space-time properties are not powers [Molnar]

11930 Essences don't entail accidents [Molnar]

9215 Natural necessities aren't metaphysical [Fine,K]

12239 Essentialism is not science [Oderberg]

10411 Properties and powers can come apart [Swoyer]

15702 Essentialism isn't knowledge of essences [Gelman]

15705 Essentialism encourages scientific thought [Gelman]

17479 Elements' natures must be in the nucleus [Hendry]

17484 The nature of water is macroscopic [Hendry]

17485 Nature of water is finest-grained water [Hendry]

17396 We can now explain the colour of gold [Scerni]

16760 Substantial forms,then scientific essentialism [Pasnau]

16976 Is scientific essence modal in nature? [Tahko]

b. Scientific necessity

11043 Fire can never be cold [Aristotle]

15966 Structures necessitate their powers [Locke]

15984 Corpuscles explain necessities of powers [Locke]

15950 To know substance, learn necessary connections [Locke]

19669 Laws must to necessary, to be known? [Kant]

19672 Aleatory reason won't prove necessary laws [Meillassoux]

8933 Science seeks inner necessities [Hegel]

5818 Water is H2O in all possible worlds [Putnam]

13603 Science shows the limits of the possible [Ellis]

5464 Essentialists say natural laws are necessary [Ellis]

8560 Laws govern properties in all possible worlds [Shoemaker]

15763 Causal necessity, a type of logical necessity [Shoemaker]

8561 Different laws needs different properties [Shoemaker]

17054 Science facts about gold are necessities [Kripke]

9387 Gold necessarily has atomic number 79 [Kripke]

17057 Heat's molecular motion in all possible worlds [Kripke]

15223 A world theory has necessary effects [Harré/Madden]

15241 No contradiction, so no necessity? [Harré/Madden]

11957 Kinds and powers exist contingently [Molnar]

14345 The necessity of the laws is just conceptual [Mumford]

9506 A law necessitates salt dissolving in water [Bird]

19667 Contingent laws should be obvious to us? [Meillassoux]

19670 Why are contingent laws of nature stable? [Meillassoux]

14548 Causation won't provide any natural necessity [Mumford/Anjum]

16977 Scientists find essences in the laws? [Tahko]
19038 Laws CAN be otherwise - if the properties are [Vetter]

c. Essence and laws

17005 Forms of things make them obey laws [Hooker,R]
17023 I am not saying gravity is essential to bodies [Newton]
17009 It is possible gravity arises from matter [Newton]
19403 Each possible world has its own laws [Leibniz]
12725 The nature of bodies explains laws [Leibniz]
16507 Inner laws match outer laws [Leibniz]
11945 God makes both natures and laws [Leibniz]
13198 Gravity is a feature of matter's structure [Leibniz]
13093 Law is the permanence in substance [Leibniz]
19958 Laws: necessary relations of natures of things [Montesquieu]
7206 Strong or weak things don't follow rules [Nietzsche]
7140 'Laws' are merely power relations [Nietzsche]
7142 'Laws' are symptoms of the will to power [Nietzsche]
15470 Causal laws are summaries of powers [Martin,CB]
6614 Elaborated ontology is needed to explain laws [Ellis]
15892 Laws tell us what mechanisms must do [Harré]
18089 Dispositions are laws of individual natures [Place]
15240 It is a law if you see why it is regular [Harré/Madden]
9434 Laws are kinds having essential properties [Mumford]
17993 Laws are relations supervening on essences [Vetter]

d. Knowing essences

9787 Scientists must know the essences of objects [Aristotle]
16745 Why do flies have that colour, or those feet? [Bacon,R]
7713 Substance is sensations arising from essence [Locke]
12545 Knowing inward constitutions is possible [Locke]
17968 Deeper axioms show essence and unity [Hilbert]
12310 We know essence and accident [Copi]
5487 Keep semantics, epistemology & ontology apart [Ellis]
6612 Dispositions respond to general principles [Ellis]
8553 Immutable powers implies essences [Shoemaker]
4965 Science searches for essence in structure [Kripke]
21219 Essence is the invariable through change [Velarde-Mayol]
14307 Presumably there are unrevealed dispositions [Mumford]
9437 Assess essential by examining possibilities [Mumford]
15704 Categories first, then underlying essences [Gelman]
6789 Metal flames need research, not definition [Bird]

e. Anti scientific essentialism

13296 Active cause shapes passive matter [Stoic school]
13150 God makes the planets move [Newton]
12178 Gravity is not innate in matter [Newton]
6734 We can't grasp essential causes of properties [Berkeley]
12110 We can never know inner natures [Comte]
10246 Science cannot attain to essences [Weyl]
10931 Physical dispositions need modal quantifiers [Quine]
17862 Essence gives an illusion of understanding [Quine]
12179 Essentialism blocks science progress [Popper]
5492 How can essence generate appropriate force? [Armstrong]
16547 Law change makes H2O contingent [Lowe]
12243 Scientific essentialism too reductionist [Oderberg]
4799 What distinguishes essential properties? [Psillos]
15178 Science cannot reveal necessities [Sidlele]
15706 Some social essences are clearly not real [Gelman]
17864 Essences don't reveal natures [Almog]
17863 Essentialism drives us away from reality [Almog]

9. Counterfactual Claims

laws as involving claims about other possible worlds
15875 Substances stay fixed in counterfactuals [Harré]
4781 Not all counterfactuals are causal [Kim]
4398 Causes are explained by counterfactuals [Lewis]
4795 Counterfactuals are ok if you understand laws [Cohen,LJ]
3977 Laws are true,general,confirmed,hypothetical [Fodor]
4208 Death needs birth, but isn't caused by it [Lowe]
4788 Good theories avoid counterfactuals [Dowe]
4780 'If he jumped, there was a net' [Psillos]
4791 Causes are what make a difference [Psillos]
9489 Interventions scupper conditional laws [Bird]

10. Closure of Physics

laws of physics can give a complete account of everything
7859 Leibniz accepted the completeness of physic [Leibniz]
20974 There are no special forces in living cells [Papineau]
20970 Determinism is possible without closed physics [Papineau]
20976 The completeness of physics cannot be proved [Papineau]

11. Against Laws of Nature

rejection of the very idea that there are 'laws' of nature

14803 Precisions reduces confidence in natural laws [Peirce]
14826 We want laws, to submit to them [Nietzsche]
15877 Science just seeks good descriptive language [Poincaré]
14174 Motion and gravity are just definitions [Russell]
5393 Are our laws exceptionless, or real? [Russell]
18733 Laws are just descriptions of phenomena [Wittgenstein]
5470 'Laws of nature' a medieval invention [Hall,AR]
15239 Any reasonable generalisation is a law [Harré/Madden]
9426 The world is just local particular facts [Lewis]
16170 We adjust nature to make it fit the maths [Cartwright,N]
16178 There are few laws for theory intersection [Cartwright,N]
16181 Combined laws have odd outcomes [Cartwright,N]
11921 Powers, not laws, come first [Molnar]
16558 Biology contains few laws of nature [Machamer/Darden/Craver]
9411 Natural laws arrive in the 17th century [Mumford]
9412 Only an inert world would need laws [Mumford]
9439 What are internal or external law government? [Mumford]
14985 Laws don't seem to improve theories [Sider]
14987 Key physics is often not lawlike [Sider]
13286 There are no scientific laws in biology [Koslicki]
14383 Laws are regularities, not things causing them [Lauridan]
14554 Laws are just descriptions of powers behaviour [Mumford/Anjum]
14564 Equation laws need simultaneous ingredients [Mumford/Anjum]

27. Natural Reality

A. Classical Physics

1. Mechanics

forceful interactions between larger objects

a. Explaining movement

1713 Magnets have souls, as they cause movement [Thales]
12269 Everything is moving [Heraclitus]
5115 The idea that everything is at rest is absurd [Aristotle]
455 Movement is logically impossible [Zeno of Elea]
3059 Movement is an illusion [Melissus]
20063 Motion fulfils potentiality [Aristotle]
5114 Animals initiate movement; why not the cosmos? [Aristotle]
5116 Unnatural movement has an obvious cause [Aristotle]
1738 Movement comes from desire or intellect [Aristotle]
1739 Movement begins at a middle still point [Aristotle]
3063 Motion is a logical impossibility [Pyrrho]
5696 Movement requires empty space [Lucretius]
5706 Atoms move themselves [Lucretius]
1899 Self-movement either pushes or pulls itself [Sext.Empiricus]
1900 Infinite division makes movement impossible [Sext.Empiricus]
1901 Atomism makes all velocities equal [Sext.Empiricus]
17234 Motion is one place, then another [Hobbes]
15866 Horizontal motion, not vertical, is natural [Newton]
12484 Motion is changing distances [Locke]
12696 Bodies are recreated in motion [Leibniz]
19348 Power for change is the reality of motion [Leibniz]
12985 Is motion just 'change of place'? [Leibniz]
14168 Motion is occupying places at times [Russell]
4786 Motion: be at intervening points at instants [Russell]
399 If gravity moves objects, why not the Earth? [Williams,B]
15243 We see motion, not successive occupations [Harré/Madden]
20365 We infer movement from single points [Rescher]
4224 Motion may involve no intrinsic change [Lowe]
14725 Is motion an intrinsic feature of a thing? [Sider]

b. Laws of motion

19673 Maths reveals acceleration behind movement [Galileo]
20964 The 'quantity of motion' is conserved [Descartes]
15958 Inertia rejects 'natural states' for things [Newton]
20968 Newton's 3rd says momentum is conserved [Newton]
17017 1: Unforced bodies rest, or go straight [Newton]
17018 2: Change of motion is proportional to force [Newton]
17019 3: Action and reaction are equal and opposite [Newton]
22173 Galileo proved heavier falls aren't faster [Okasha]

c. Forces

13548 The moon causes the tides [Seneca]
17259 Force is quantity of imposed movement [Hobbes]
17547 Force over distance was very strange [Newton]
20966 Newton introduced non-contact forces [Newton]

20967 Newton omits causes of his forces [Newton]
16708 Forces are the return of real qualities? [Pasnau]
13153 Study quantities of forces, not qualities [Newton]
12724 Forces are inferred, and predict [Newton]
15986 Forces should be rejected as occult [Locke]
16685 Force in bodies keeps our hands apart [Locke]
12924 Force gives reality and identity [Leibniz]
15307 'Force' once meant action and potential [Leibniz]
12719 Force is what produces action [Leibniz]
13167 'Force' is needed to explain mechanics [Leibniz]
12758 Physical force is like our free will [Leibniz]
13192 Power is both mass and active force [Leibniz]
13196 All qualities of bodies reduce to forces [Leibniz]
13096 Force is like a soul causing change [Leibniz]
13097 No substance without forces [Leibniz]
16709 'Forces' can be scholasticism in disguise [Leibniz]
14171 Force is just based on a fiction [Russell]
12671 Forces as non-causal interveners? [Ellis]
15313 Forces are the source, powers the outcome [Breheny]
21202 The weak force has very short range [Martin,BR]
21181 We have two rival views of forces [Hesketh]

d. Gravity

13593 Falling and orbiting are the same thing [Newton]
13605 Gravity isn't a force; it doesn't diminish [Mayer]
20636 Newton is a special case of Einstein [Einstein]
21236 Gravity is now a field, not a force [Farnelo]
21167 Gravity attracts, and never repels [New Sci.]

2. Thermodynamics

principles of change of heat and energy

a. Energy

20646 Energy links heat, light, electricity [Helmholtz]
20644 Energy is a principle of all nature [Kelvin]
17540 Everything is made of moving energy [Heisenberg]
17541 Energy is the substance causing all change [Heisenberg]
12674 Realists must believe in energy [Ellis]
15265 Energy is a useful quasi-substance [Harré/Madden]
15280 Kinetic energy explains impacts [Harré/Madden]
21183 Thermodynamics introduced work and entropy [Hesketh]

b. Heat

20645 Heat is a state of vibration [Joule]
20972 Energy converts to heat, and heat to energy [Joule]
20624 Work becomes heat, but not vice versa [Close]

c. Conservation of energy

20969 Energy conservation needs potential energy [Newton]
20965 Momentum and energy are conserved [Leibniz]
20973 Kinetic plus potential energy is conserved [Helmholtz]
20623 Energy changes, but is conserved [Close]
20975 Wave collapse violates energy conservation [Papineau]
21211 Conservation laws block reactions [Martin,BR]

d. Entropy

5700 Destruction is quicker than construction [Lucretius]
20625 Third Law: minimum entropy at absolute zero [Close]
19950 Time may be linked to asymmetric entropy [New Sci.]

B. Modern Physics

1. Relativity

revision of the background framework of physics

a. Special relativity

12709 Motion consists in relation [Leibniz]
6735 A single body cannot move [Berkeley]
21230 'Special' means just straight and constant [Einstein]
21231 Assume the constancy of light and laws [Einstein]
14613 Choose a preferred frame externally? [Smart]
20628 Electricity or magnetism? - it depends [Close]
20622 Acceleration is constant in all frames [Close]
21109 Space can expand at faster than light speed [Krauss]
14016 Special Relativity is very verificationist [Bourne]
14019 Relativity needs past and future too [Bourne]

b. General relativity

20634 There is no absolute force or acceleration [Einstein]
17063 Einstein explains Mercury's perihelion [Smart]
20635 Curvature relates to energy-momentum [Close]
21104 Matter density determines gravity [Krauss]
21176 In the Big Band general relativity fails [New Sci.]

2. Electrodynamics

theory of the spectrum that includes light

a. Electrodynamics

20627 Electric fields have four basic laws [Close]
20629 The speed shows light is electromagnetism [Close]
20630 Light actually is the quantised photons [Close]
20632 QED: electro-magnetic fields are quantised [Close]
20637 Energy-momentum gets light rays bending [Close]
20642 Photon exchange drives electro-magnetism [Close]
20649 Light interference shows it is waves [Watson]
21209 Electrons make and swallow virtual particles [Martin,BR]
19478 Light's direction is outside space-time [New Sci.]
21147 QED includes special relativity and quanta [New Sci.]
21155 Massless photons have infinite range [New Sci.]
21191 Photons are linked B and W⁺ bosons [Hesketh]
21199 Charges with electric spin are magnets [Hesketh]

b. Fields

15314 Faraday introduced Unity to the idea of field [Faraday]
17548 Fields transfer forces point to point [Heisenberg]
18202 Fields gradually replaced substances [Einstein/Infeld]
20639 Quantum fields existentially fluctuate [Close]
11931 Energy fields are discontinuous [Molnar]
18223 Field theory makes points causal [Field,H]
21201 A 'field' is a region of space-time points [Martin,BR]
21212 The Higgs field is nonzero in its vacuum state [Martin,BR]
21730 Fields are univerally spread properties [Baggott]
21731 Scalar, vector, tensor or spinor fields [Baggott]
21161 All the fields merge at extreme high energy [New Sci.]
20462 Fields are sets of packets of energy [Rovelli]
20463 There are particle and force fields [Rovelli]
20464 Reality is events happening in fields [Rovelli]

c. Electrons

20631 Electrons conform to special relativity [Close]
20641 Electron mass is from the Higgs field [Close]
18520 Electrons can lose their individuality [Heil]
20661 Hydrogen electrons turn 10¹³ ps [Watson]
21205 Particles may have further structure [Martin,BR]
21146 Special relativity affects electrons [New Sci.]
20459 Electrons are just leaps and interactions [Rovelli]
20460 Electrons are not waves [Rovelli]
21180 Electrons are just properties, made of nothing [Hesketh]
21189 A new force could bind electron components [Hesketh]

d. Quantum mechanics

17533 Radiation needs waves and particles [Heisenberg]
18530 Nobody understands quantum mechanics [Feynman]
21107 Uncertainty allow very brief high energy [Krauss]
20647 Quantum theory explains distinct elements [Watson]
21235 Schrödinger waves are energy-position links [Farnelo]
21203 Uncertainty can breach energy conservation [Martin,BR]
21207 Two fermions can't be in the same state [Martin,BR]
19473 Wave functions evolve in Hilbert space [New Sci.]
19474 Quantum states have external time [New Sci.]
20466 QM gives events and interactions, not being [Rovelli]
21182 Quantum mechanics is precise and confirmed [Hesketh]
21184 Stable electron orbits needed explanation [Hesketh]
21187 Virtual particles are anarchic and secretive [Hesketh]

3. Chromodynamics

theory of the strong nuclear force

a. Chromodynamics

17563 The strong force pushes as well as pulls [Inwagen]
21148 The strong force varies with distance [New Sci.]
21151 Strong force gluons can interact [New Sci.]
21152 Quark force tight, nucleus force weaker [New Sci.]
21185 Colour charge is + or -, with direction [Hesketh]

b. Quarks

21142 Hadron symmetries reveal three basics [New Sci.]
21143 Quarks in threes can build hadrons [New Sci.]
21150 Three quark colours can cancel out [New Sci.]

4. Standard Model

agreed theory for most of particle physics

a. Concept of matter

15311 Matter is made up of forces [Priestley]
17402 Nature has matter, forces and essences [Mendeleeev]
6470 Matter is the closest limit of appearances [Russell]

7547 Matter is divided in both time and space [Russell]

7551 Matter is a logical construction [Russell]

21706 Sense-data reveal or construct matter? [Russell]

17532 Why are atoms stable after collisions? [Heisenberg]

17537 Position is complementary to velocity [Heisenberg]

17551 Electromagnetism was assumed to depend [Heisenberg]

20626 Heat, work and energy explain matter [Close]

6551 'Physical' is in physics or just in space-time [Lycan]

9574 'Gunk' is an atomless individual [Chihara]

20654 Matter needs two quarks, electrons and leptons [Watson]

14900 Matter is emergent, not basic [Ladyman/Ross]

14937 'Made of' something is obsolete physics [Ladyman/Ross]

17411 Atomic number suggests unity of matter [Scerri]

17420 Energy predicts stability of nuclei [Scerri]

20465 Nature: granularity, indeterminacy, relations [Rovelli]

b. Standard model

21204 Standard model covers strong, electric, weak [Martin,BR]

21732 The standard model has 61 particles [Baggott]

21145 The four forces are effects of particles [New Sci.]

21154 W⁺, W⁻ and Z⁰ carry the weak force [New Sci.]

21153 Weak force explains particle transitions [New Sci.]

21156 Heavy W and Z mean short range [New Sci.]

21164 Why to proton and electron charge match? [New Sci.]

21170 The Standard Model leaves many puzzles [New Sci.]

21194 Standard Model omits particleless gravity [Hesketh]

21195 Standard Model simplifies at high energies? [Hesketh]

21197 Standard Model forces are 1- 2- and 3-D [Hesketh]

c. Particle properties

21234 Basic particles of one type are identical [Farnelo]

21206 Particle numbers and mass fix properties [Martin,BR]

21208 Electrons are points, so can't 'spin' [Martin,BR]

21210 Virtual particles surround charged particles [Martin,BR]

21140 Spin is a built-in ration of angular momentum [New Sci.]

21149 Quarks have red, green or blue colour charge [New Sci.]

21157 High particle energy shortens wavelength [New Sci.]

21158 Spin ½ is antisocial [New Sci.]

21165 Spin is like rotation, and easily measured [New Sci.]

21188 The weak force needs a 'weak charge' [Hesketh]

d. Mass

20648 Mass is a measure of energy content [Einstein]

6807 Newton conserves mass, Einstein doesn't [Bird]

21163 Most mass is binding energy, not quarks [New Sci.]

21168 Gravitational mass equals inertial mass [New Sci.]

e. Protons

21106 Proton mass is largely virtual particles [Krauss]

21138 Neutrons can decay into protons [New Sci.]

21144 Quarks all decay into up and down [New Sci.]

21186 Gluons restrain the wild quarks in protons [Hesketh]

f. Neutrinos

21141 Neutrinos needed to complete beta decay [New Sci.]

21169 Only neutrinos spin anticlockwise [New Sci.]

21192 Neutrinos only interact with the weak force [Hesketh]

g. Anti-matter

21166 Antineutrinos have opposite spin and number [New Sci.]

5. Unified Models

speculative theories to unite physics

a. Electro-weak unity

20633 What is the electroweak Higgs field? [Close]

21171 Weak and electromagnetic split early on [New Sci.]

b. String theory

21213 String theory has one free parameter [Martin,BR]

19476 Strings need 10 or more dimensions [New Sci.]

19954 String theory has far too many models [New Sci.]

19953 Strings make space-time 'atomic' [New Sci.]

21175 Measurable 'stringballs' may be possible [New Sci.]

21177 String theory can describe the graviton [New Sci.]

21178 String theory is now part of M-Theory [New Sci.]

21179 Loop quantum gravity expresses string theory [New Sci.]

c. Supersymmetry

21159 Supersymmetry adds heavy bosons and fermions [New Sci.]

21162 Only supersymmetry can incorporate gravity [New Sci.]

21172 Evidence does not support supersymmetry [New Sci.]

21173 Did original supersymmetry split apart? [New Sci.]

21196 Forces must be identical somewhere, to combine [Hesketh]

C. Space-Time

1. Space

places where physical things exist

a. Void

13217 No void, so no movement or separation [Parmenides]
5100 Change is possible in a plenum, without void [Aristotle]
5101 What fixes direction of movement in a void? [Aristotle]
20905 Movement needs a receptive void [Democritus]
20918 Void is place, so it can't explain place [Aristotle]
14043 Void is inert, making motion possible [Epicurus]
20822 There is no void inside the cosmos [Zeno of Citium]

b. Space

13180 Space is order of coexisting possibles [Leibniz]
16922 Only three lines can meet at right angles [Kant]
17736 Experiencing space presupposes representation [Kant]
5531 We cannot imagine the absence of space [Kant]
6468 Private space, and space of perspectives [Russell]
7552 The space of particulars is six-dimensional [Russell]
15321 Space has no place, but is omnipresent [Harré/Madden]
21112 Space is a flux of virtual particles [Krauss]
9922 If space is a force-field, it is physical [Burgess/Rosen]
10683 Ignore space; matter varies in shape [Hossack]
19947 Hilbert Space represents all possible states [New Sci.]

c. Points in space

10863 No extra points in extra dimensions [Cantor]
16962 Use regions instead of points? [Whitehead]
14160 Points are needed, to compose space [Russell]
18970 Only absolute position has real 'points' [Quine]
17811 How to name or construct each point? [Kreisel]
17707 Space is made of many tiny pieces [Feynman]
18257 Why are measurement limits points? [Dummett]
3334 Rationalist points, empiricist regions [Benardete,JA]
8269 Points are limits, so cannot compose space [Lowe]
4227 Lines and points are abstractions, not parts [Lowe]
17708 Space has points, events need regions? [Mares]

d. Substantial space

5097 Is a place located in a place? [Aristotle]
5099 The universe as a whole is not anywhere [Aristotle]
14031 Movement requires space [Epicurus]
17013 Space is smooth and immovable [Newton]
2103 How could we tell if God shifted the universe? [Leibniz]
17543 Space carries geometry and kinematics [Heisenberg]
15981 Does absolute space also have locations? [Alexander,P]
8592 Unlike time, empty space is measurable [Bennett]
18220 Substantivalism begins to look better [Field,H]
3904 Space measurement implies no movement [Scruton]
19035 General Relativity has independent space-time [Hoefler]
14991 Space has real structure [Sider]
20659 Space and its contents seem one stuff [Wolfgram]
21160 Even low energy space is not empty [New Sci.]
20458 Particles + fields, and space is a field [Rovelli]

e. Relational space

1511 How can a 'place' have a location? [Zeno of Elea]
5098 Place is the limits of a containing body [Aristotle]
15980 The location of the universe is unknown [Locke]
12952 Space is an order among possibilia [Leibniz]
18219 Space as a field isn't relational [Field,H]
4228 Relational space won't explain an empty place [Lowe]
21190 'Space' in physics just means location [Hesketh]

2. Time

measure of passing events

a. Time

16693 Time is not made up of nows [Aristotle]
14525 Stoic time is separate;Epicurean is a property [Epicurus]
13311 Is time separate from the cosmos? [Seneca]
1905 Time can't be divisible or indivisible [Sext.Empiricus]
5978 We know time directly, but can't explain it [Augustine]
15202 Eternity can coexist with passing time [Aquinas]
19381 Past and future don't exist, so time doesn't [William of Ockham]
17015 Measuring time needs uniform motion [Newton]
12487 We can't prove durations equal [Locke]
13181 Time is order of inconsistent possibles [Leibniz]
2101 Time is just the succession of created things [Leibniz]
5535 Non-simultaneity is a synthetic intuition [Kant]

5560 There are three modes of time [Kant]
5561 Time cannot involve succession [Kant]
4189 Time is possible mutual exclusion [Schopenhauer]
7802 A is past/future; B is before/after [McTaggart]
4230 A places things in time; B is always relative [McTaggart]
2608 Time is specified absolutely or relatively [McTaggart]
15199 Change makes the A-series prior [McTaggart]
21581 We only experience events, not times [Russell]
14935 Time's arrow rests on causation [Reichenbach]
15198 A-series times change; B times are fixed [Le Poidevin]
15206 The crux is how you view the future [Le Poidevin]
6865 A-theory time exists; B-theory is relative [Le Poidevin]
16207 Time is discrete, dense or continuous [Hawley]
15021 Is time like space, or not? [Sider]
14022 Presentism, or Dynamic or Static Eternalism? [Crisp,TM]
16265 Time must pass at one second per second [Maudlin]
14003 Tenseless time is all real, without passage [Bourne]
14005 Objects before each other, or before now [Bourne]
13440 Causal powers give direction to time [Esfeld]
15208 Past, present, future walked into bar... [Sommers,W]
17592 Barman: Time! Augustine: ... [Sommers,W]

b. Tensed (A) time

3915 The Hopi have no concept of time [Whorf]
14614 A-theory is too weird, and can be explained [Smart]
14615 If time flows, then how fast? [Smart]
15203 Tense is essential for thought and action [Perry]
15067 No tensed/tenseless distinction? [Fine,K]
15077 Are all A-theory objects tensed too? [Fine,K]
15187 Tensed time implies Presentism? [Le Poidevin]
15192 We share now, but not here [Le Poidevin]
15205 Reduce the tenseless to the tensed? [Le Poidevin]
14723 Indexicals can eliminate tensed talk [Sider]
16264 Passing time is basic to the world [Maudlin]
16266 One B series, but an infinity of A series [Maudlin]
14608 A-theory, unlike B, takes tenses seriously [Zimmerman,DW]
14006 Past and future are blatantly asymmetrical [Bourne]

c. Tenseless (B) time

14012 Absolute time flows unrelated to anything [Newton]
13713 Quine holds time to be 'space-like' [Quine]
15204 Actual tensed sentences cannot be tenseless [Perry]
15066 Tensed sentences have an empty place? [Fine,K]
15191 Surely at least minds have tense? [Le Poidevin]
15193 New tenseless theories use indexicals [Le Poidevin]
15197 Fictions seem to have a tenseless nature [Le Poidevin]
14734 B-series is eternalist and tenseless [Sider]
14736 B-theory omits the present moment [Sider]

d. Beginning of time

1526 Most agree that time can have no beginning [Democritus]
312 Time was created with the cosmos [Plato]
617 Both movement and time have to be eternal [Aristotle]

e. Existence of time

5102 All of time is non-existent, in past or future [Aristotle]
20920 Many cosmoses means many times [Aristotle]
1904 Time can't be limited or unlimited [Sext.Empiricus]
5981 A year must be complete to exist [Augustine]
17012 Time is independene and uniform [Newton]
12720 No coexisting parts, so no time [Leibniz]
2107 Time is made up of non-existent instants [Leibniz]
4231 Time is unreal, because contradictory [McTaggart]
8591 No time without change [McTaggart]
8595 Three region-freezes coincide every 60 years [Shoemaker]
19951 Maybe we need laws that include time [New Sci.]
19949 Quantum theory needs a clock - but where? [New Sci.]

f. Presentism

20818 There is no present to experience [Chrysippus]
20821 Continuous time can't contain a present [Chrysippus]
20819 Present exists; past and future subsist [Chrysippus]
5979 How can past and future exist? [Augustine]
17243 The past is gone, apart from memory [Hobbes]
12486 An instant is the time of a single idea [Locke]
17552 The 'present moment' has relative length [Heisenberg]
18401 The mere present can't be experienced [Armstrong]
12689 Fix simultaneity by the Big Bang? [Ellis]
12690 Define the present by light and Big Bang [Ellis]
8167 Presentism implies the present cannot change [Dummett]

8196 The present cannot exist on its own [Dummett]
14408 Language and folk view support presentism [Bigelow]
4473 'Presentism' says there is only the present [Moreland]
14724 Can presentism talk of multiple times? [Sider]
14756 Presentism always has a vantage point [Sider]
14026 Treat 'times' as abstract objects [Crisp,TM]
14405 Can presentism explain objects having existed? [Merricks]
14406 Presentists don't embrace the instantaneous [Merricks]
14407 Presentists should deny the present moment [Merricks]
14007 Can presentists speak of past and future? [Bourne]
14011 Presentism seems to deny causation [Bourne]
14013 Special Relativity allows some absolutes [Bourne]
14017 Presentness should define simultaneity, not vv [Bourne]
14938 Quantum gravity might allow presentism [Ladyman/Ross]
18927 Things extend over time, so time extends! [Cameron]
13990 Presentism: only present objects exist [Markosian]
13992 We can't relate to non-existent objects [Markosian]
13994 Presentism denies talk of past and future? [Markosian]
13995 Must things exist to have properties? [Markosian]
13996 Do haecceities survive, to be referred to? [Markosian]
13997 Presentists can paraphrase tricky sentences [Markosian]
13998 The past is more modal than spatial [Markosian]
13999 'S was a philosopher' says nothing [Markosian]
13993 Relativity relativises Presentism [Markosian]
19041 Explain cross-temporal relations by surrogates [Vetter]

g. Eternalism

8197 Maybe past and future are real [Dummett]
15024 The present moves like a spotlight [Sider]
14020 Eternalism: past, present and future all exist [Crisp,TM]
17960 Eternalism makes past and future real [Merricks]
15104 The spotlight view can't explain privilege [Cameron]
19026 Past and future look very different. Why? [Vetter]

h. Growing block of time

1702 Past and present are necessary, but not future [Aristotle]
5980 How can the future be short but non-existent? [Augustine]
8160 Present and past exist, but not future [Broad]
14609 Past and present exist, but not future [Broad]
9668 If the future is unreal, this is the end! [Lewis]
15195 Do we have obligations to the future? [Le Poidevin]
14722 The past exists; the future does not [Sider]
17961 Are present and growing edge the same? [Merricks]
14610 Why do we care about what is present/past? [Zimmerman,DW]
14015 Past and present exist; future doesn't [Bourne]

i. Time and change

314 Observing the cosmos leads to time and number [Plato]
5103 Time needs change in our minds to be noticed [Aristotle]
8590 Time does not exist without change [Aristotle]
5104 Time is an aspect of change [Aristotle]
13228 There is no time without movement [Aristotle]
20820 Time is an interval or measure of motion [Posidonius]
5698 No one can sense time without movement [Lucretius]
1903 Without motion or rest, there is no time [Sext.Empiricus]
18455 Some think there is time without movement [Porphyry]
5983 Is time just cosmic movement? [Augustine]
16697 God can separate time from change [Crathorn]
12955 Time without change can't be measured [Leibniz]
8186 There is no time prior to change happening [Dummett]
4226 Cyclical freezes might coincide for one year [Shoemaker]
2949 We seem to think time itself changes [Lockwood]
15188 Change needs persistence through time [Le Poidevin]
15189 A-change and B-change are different? [Le Poidevin]
14411 Does only presentism allow change? [Merricks]
20470 Only heat distinguishes past from future [Rovelli]

j. Time as subjective

5106 Does time depend on mind? [Aristotle]
18454 Time is the circular movement of the soul [Porphyry]
5984 Maybe time is an extension of mind [Augustine]
6733 Time is just the flow of our ideas [Berkeley]
5534 We cannot imagine the non-existence of time [Kant]

3. Space-Time

relative space and time, treated as one system

19384 Space-time concerns all possibilities [Leibniz]
2100 Space and time are both relative [Leibniz]
16921 Without sensations, spacetime remains [Kant]
5536 Space and time are pointless in themselves [Kant]

14014 Time and space fade away, into space-time [Minkowski]
14156 Time-instants and line-points are the same [Russell]
21232 Measurement is the space-time link [Einstein]
15482 Space-time has properties and is a substratum [Martin,CB]
20640 Space-time is indeterminate foam [Close]
18279 Relativity is absolutist about space-time [Coffa]
15194 Physics uses verificationist time [Smith,Q]
14735 Space directionless 3D; time is causal [Sider]
9504 Space-time contains possible locations [Bird]
14588 The space-time points seem basic [Hawthorne]
14901 Is spacetime emergent, not basic? [Ladyman/Ross]
14924 What is the substance of spacetime? [Ladyman/Ross]
19475 Relativity space-time; quantum space and time [New Sci.]
19955 Is space-time a manifestation of entanglement? [New Sci.]
19948 Space-time makes time a muddle [New Sci.]

D. Cosmology

1. Cosmology

origins and nature of the universe

7608 The world is fixed and immovable [Isaiah]
7489 Joshua said, Sun, stand thou still [Anon (Josh)]
1791 The earth is spherical [Parmenides]
1794 Hesperus and Lucifer are the same star [Parmenides]
1787 The earth moves in a circle [Philolaus]
20911 There are innumerable worlds, some lifeless [Democritus]
369 If earth is symmetrical it needs no support [Plato]
309 The world is eternal, because it is beautiful [Plato]
402 Earth casts a spherical shadow on the moon [Aristotle]
403 Star visibility proves the earth spherical [Aristotle]
14051 Each cosmos has a boundary and motion [Epicurus]
20811 The cosmos must be alive and rational [Zeno of Citium]
2648 The universe is perfect so it must be rational [Zeno of Citium]
5715 There are bound to be other worlds [Lucretius]
14169 Does 'universe' include past and future? [Russell]
5994 Cosmos open/closed, purpose, alive, eternal? [Robinson,TM]

2. Eternal Universe

no beginning for the universe

8154 Non-existence cannot preceded Existence [Anon (Upan)]
1746 Parts of the cosmos change, not the whole [Anaximander]
420 The cosmos is uncreated - a fluctuating fire [Heraclitus]
456 Nothing can be created out of nothing [Melissus]
5083 Creation from existence or non-existence? [Aristotle]
16595 If things cease, why hasn't it all ceased? [Aristotle]
20827 The cosmos is consumed in fire [Stoic school]
5694 Nothing can be created from nothing [Lucretius]

3. The Beginning

first moment of the universe

148 The origin could never return if destroyed [Plato]
308 The cosmos was created, because it changes [Plato]
273 All motion derives from something self-moving [Plato]
1498 The world began, but may be eternal [Aristotle]
613 Mind and nature are even prior to chance [Aristotle]
619 There has to be an unmoved mover [Aristotle]
620 The first mover is necessary, and thus good [Aristotle]
5977 Earth was created, because it changes [Augustine]
21108 The universe is 13.72 billion years old [Krauss]
16581 God created all matter, out of nothing [Pasnau]

7. Black Holes

collapsed stars emitting no light

19477 General relativity predicts black holes [New Sci.]
19952 Relativity gets black hole entropy wrong [New Sci.]

8. Dark Matter

unknown matter that restrains cosmic expansion

16420 Dark matter is 84.5% of the universe [New Sci.]
21174 Dark matter is massive and without charge [New Sci.]
21193 68% dark energy, 27% dark matter etc [Hesketh]

9. Fine-Tuned Universe

constants of nature having fruitful values

18501 Maybe the cosmos had to be fine-tuned [Heil]
21198 Fine-tuned theories are probably wrong [Hesketh]

10. Multiverse

there exists a vast multitude of varied universes

395 There may be more than one cosmos [Aristotle]
14036 There are endless varied cosmoi [Epicurus]

21111 A multiverse may be inevitable [Krauss]

E. Chemistry

1. Chemistry

general ideas about behaviour of molecules

- 15259 Atom powers are relations and spectrum [Harré/Madden]
- 15263 Chemistry is not purely structural [Harré/Madden]
- 14098 An acid is just a proton donor [Rosen]
- 20651 The shape of molecules is also important [Watson]
- 17483 Water undergoes continuous change [Hendry]
- 17482 Structure matters, as well as atoms [Hendry]
- 17392 Poisonous atoms make nutritious molecules! [Scerri]
- 17391 Periods and bonding are the big ideas [Scerri]
- 17404 Chemistry works from data, not principles [Scerri]
- 17407 Electrons are the source of chemistry [Scerri]
- 17409 Radioactivity shows physics is prior? [Scerri]
- 17415 Covalent bonds are shared electrons [Scerri]
- 17468 There are over 100,000,000 compounds [Weisberg/Needham/He
- 17469 'H2O' gives proportions, not structure [Weisberg/Needham/Hendr
- 17470 Fluctuations in water cause its properties [Weisberg/Needham/H
- 17473 Chemistry will never be reduced to physics [Weisberg/Needham/
- 17474 Quantum theory won't predict which molecule [Weisberg/Needha
- 17475 Mean kinetic energy + equilibrium = temp [Weisberg/Needham/H
- 17604 We aim to synthesise any molecule [New Sci.]

2. Modern Elements

92 natural elements, and some further ones

- 17399 Essence of elements is in compounds [Mendeleev]
- 17559 Is gold one gold atom, or a group of them [Inwagen]
- 7036 Real properties are few, complex ones many [Heil]
- 17476 Elements can be tracked through change [Hendry]
- 17477 Elements by number allows mass to differ [Hendry]
- 17398 19th elements are abstract and material [Scerri]
- 17418 All the elements evolved from hydrogen [Scerri]
- 21200 'Elements' are not chemically destructible [Martin,BR]
- 17467 Some isotopes react more quickly [Weisberg/Needham/Hendry]

3. Periodic Table

arrangement of modern elements in a pattern

- 17401 Essence of elements can ignore some facts [Mendeleev]
- 17400 Abstract elements led to their essences [Mendeleev]
- 12450 The periodic table limits the possibilities [Azzouni]
- 17480 Nuclear charges fixes most behaviour [Hendry]
- 17395 Ordering elements by atomic number came late [Scerri]
- 17410 Unit progression shows the gaps [Scerri]
- 17406 Use atomic number, not atomic weight [Scerri]
- 17408 Base the table on isotopes, not elements? [Scerri]
- 17412 Positive charges place atoms in the table [Scerri]
- 17414 Pauli partially explained the table [Scerri]
- 17413 Outer-shell electrons decide the groups [Scerri]
- 17416 Is the table explained by quantum mechanics? [Scerri]
- 17417 Quantum explanation of shell filling? [Scerri]
- 17419 The periodic table is of little importance! [Scerri]
- 17422 Deepest principles will give the best table [Scerri]
- 17466 The table systematised and revealed elements [Weisberg/Needh
- 17603 Use the periodic table, and three particles [New Sci.]

F. Biology

1. Biology

scientific study of living things

- 21381 Germs contain microscopic organs [Anaxagoras]
- 651 Eurytus made Pythagorean pictures with pebbles [Eurytus]
- 3985 Biology is a type of engineering [Dennett]

2. Life

what distinguishes life, and its value

- 7280 If life is one, why use words? [Chuang Tzu]
- 5043 Surely animals aren't just machines? [Leibniz]
- 4877 Are plants just slow animals? [Dennett]
- 17567 Fire resembles life, but is less individuated [Inwagen]
- 17568 Tumours spread life, but are not lives [Inwagen]
- 17569 Unlike waves, lives do not overlap [Inwagen]
- 17570 Human life involves 16 elements [Inwagen]
- 17576 Reassembling my atoms isn't me [Inwagen]
- 17580 Our lives are centred on the brain [Inwagen]
- 17581 Being part of a life is vague [Inwagen]
- 17584 Life has borderline cases [Inwagen]
- 17585 Could a life be totally vague? [Inwagen]

- 17586 Basic life is merely molecular [Inwagen]
- 9324 Life is largely an informational process [Gulick]
- 7516 Life is just chemistry, not a magic gel [Pinker]
- 20652 1828: urea created from inorganic stuff [Watson]
- 20658 Living is an information process [Watson]
- 6126 Move,Breathe,Sense,Eat,Excrete,Reproduce,Grow [PG]

3. Evolution

theory that life results from natural selection

- 5090 Maybe design is selected accident? [Empedocles]
- 5989 Life began in a primeval slime [Archelaus]
- 15961 How can mere matter produce animals and seeds? [Boyle]
- 12567 Unthinking matter can't produce intelligence [Locke]
- 19414 All of life on earth is related together [Leibniz]
- 7646 Apart from language, we are just animals [La Mettrie]
- 19776 Small steady causes can do a lot [Rousseau]
- 6938 Evolution might give nice thoughts, not truth [Peirce]
- 14801 Evolution is destruction of bad results [Peirce]
- 20241 Finding origins is dull, not revelatory [Nietzsche]
- 7179 Survival, magnificence and evolution differ [Nietzsche]
- 7178 Utility of organs doesn't explain their origin [Nietzsche]
- 7180 Darwin overestimates 'external circumstances' [Nietzsche]
- 4535 Evolution has no goal, only stable phases [Nietzsche]
- 5314 Cultural evolution is Lamarckian and fast [Wilson,EO]
- 5315 Human evolution is 99% hunter-gatherer [Wilson,EO]
- 3502 Very basic instincts are central to the mind [Searle]
- 3804 Darwin's idea was the best idea ever [Dennett]
- 7514 The unexplained is design, by default [Pinker]
- 7515 Evolution is cruel and wasteful [Pinker]
- 7462 Human-chimpanzee split 6.6 million years ago [Watson]

4. Ecology

human life as part of the Earth's whole biosphere

- 6854 Is the environment intrinsically valuable? [Crisp,R]
- 9280 Humans are 40%+ of all living tissue [Gray]
- 6178 What gives nature value? Life? Diversity? [Rowlands]

5. Species

dividing living things into distinct groups

- 13779 Are things named by their parentage? [Plato]
- 16663 The species limits the mode of existence [Olivi]
- 19448 Men are distinct by knowing their species [Feuerbach]
- 17049 'Tiger' denotes what tigers really are [Kripke]
- 17050 Baptising tigers may involve mistakes [Kripke]
- 17051 'Cat' comes from paradigm cases [Kripke]
- 17369 We design species to help explanation [Devitt]
- 17367 Species: form, breeding, niche or lineage [Devitt]
- 17372 We must abandon higher categories of life [Devitt]
- 17373 There's no one right view of what a species is [Devitt]
- 17383 Species are the lowest-level classification [Dupré]
- 17386 Evolution mainly concerns species [Dupré]
- 17366 Species are relational, not intrinsic [Okasha]

28. God

A. Divine Nature

1. God

existence and role of a supreme being

- 8148 Brahma, the supreme god, arose spontaneously [Anon (Upan)]
- 7343 Beside me there is no God [Isaiah]
- 7994 Everything comes from me, says Krishna [Anon (Bhag)]
- 2629 Anaxagoras said universe under divine control [Anaxagoras]
- 6011 God one is the Good, god two the Creator [Numenius]
- 7835 Is Spinoza's God really a God? [Stewart,M]
- 4497 The idea of 'God' is hostility to life [Nietzsche]

2. Divine Nature

characteristics of a supreme being

- 3055 The essence of God is spherical and non-human [Xenophanes]
- 461 God is a pure solitary sphere [Empedocles]
- 466 God is pure mind permeating the universe [Empedocles]
- 13783 Even the gods love play [Plato]
- 279 Divine things are unchanging, unlike body [Plato]
- 5119 The unmoved mover has no magnitude [Aristotle]
- 2836 God is blessed in himself, not through wealth [Aristotle]
- 622 God is separate, unified and infinite [Aristotle]
- 2637 Gods made of atoms can't be eternal [Epicurus]
- 7815 God is soul of the universe, not a being [Stoic school]

- 1891 To conceive God must know his properties [Sext.Empiricus]
- 18460 God is nowhere, and hence everywhere [Porphyry]
- 6811 Allah is lord of creation and a merciful judge [Mohammed]
- 20696 Negative attributes can reveal God [Maimonides]
- 22123 God is efficient and final cause, and eminence [Duns Scotus]
- 2269 God is infinite, powerful, intelligent creator [Descartes]
- 2289 God must be existent, unique and eternal [Descartes]
- 12928 God is power, not wisdom [Leibniz]
- 7571 Spinoza's God is not a person [Spinoza]
- 4314 God has no passions, and hence no love [Spinoza]
- 7609 God is the essence of eternal laws [Spinoza]
- 17172 God is a substance with infinite attributes [Spinoza]
- 4823 God does not have free will [Spinoza]
- 21859 Lacking nothing, God has no purpose [Spinoza]
- 19435 Love God for goodness, not for necessity [Leibniz]
- 17231 God has no feelings [Spinoza]
- 12954 God produces possibility and existence [Leibniz]
- 19326 Choosing this world needed intelligence [Leibniz]
- 19439 God produces possibilities and ideas [Leibniz]
- 7666 God is a poet, not a mathematician [Hamann]
- 15618 God as Essence is beyond our knowledge [Hegel]
- 15635 An infinite God must lack character [Hegel]
- 21980 God is the absolute thing, and person [Hegel]
- 7586 God does not 'think' or 'exist' [Kierkegaard]
- 13465 Only God is absolutely infinite [Cantor]
- 18292 Only a dancing God is believable [Nietzsche]
- 7192 God as power, not goodness or wisdom! [Nietzsche]

3. Divine Perfections

existence of good qualities in their purest form

- 439 God is omniscient and omnipotent [Epicharmus]
- 175 Gods are perfectly wise [Plato]
- 152 Gods are happy contemplating reality and truth [Plato]
- 3048 God is a perfect non-human creator [Chrysippus]
- 19371 God has nine 'absolute principles' [Lulí]
- 1865 God can breach natural impossibility [Anon (Par)]
- 9111 God is not good, but more-than-good [William of Ockham]
- 2275 Deception would be a defect in a perfect God [Descartes]
- 4866 God has infinite perfections [Spinoza]
- 7829 God does not have human perfections [Spinoza]
- 17025 To be God, a perfect being must rule [Newton]
- 5041 God acts perfectly and rationally [Leibniz]
- 5048 Perfection is quantity of reality [Leibniz]
- 12988 Everything possibly perfect exists [Leibniz]
- 1414 A perfection is simple, positive and limitless [Leibniz]
- 19327 Possibilities require an all-perfect cause [Leibniz]
- 2114 Perfection is maximum variety with order [Leibniz]
- 6959 We can't assume God is anything like us [Hume]
- 18980 The greatest knower may lack omniscience [James]

4. Divine Contradictions

contradictions in our concept of a supreme being

- 1719 God couldn't be ignorant of strife and evil [Aristotle]
- 2630 God needs a body to feel and think [Cicero]
- 2645 Can the gods be sure they are eternal? [Cicero]
- 16651 God can do anything non-contradictory [Auriol]
- 6224 God can't make equality be inequality [Cudworth]
- 21252 Incompatible perfections must overlap somehow [Leibniz]
- 2920 A God who answers prayers is absurd [Nietzsche]
- 18978 The divinity's creation is morally confusing [James]
- 5208 What is a totally unobservable being? [Ayer]
- 3459 The limit of knowledge cannot be known [Searle]
- 8055 Omniscience makes decisions impossible [MacIntyre]
- 7602 In the Bible God changes his mind [Armstrong,K]
- 16427 God can do all that is logically possible [Chalmers]
- 10332 If knowledge is social, omniscience is silly [Kusch]
- 9122 God cannot share our unwanted pain [Sorensen]
- 3873 How would an omniscient being know it was? [PG]
- 3874 How would God know that his will was free? [PG]

5. God and Time

relationship between God, time and eternity

- 7603 God is timeless, unchanging, and aloof [Aristotle]
- 5976 Does God hear prayers outside time? [Augustine]
- 16702 All things are in the present time to God [Augustine]
- 16692 God has complete unending life all at once [Boethius]
- 20712 Timeless God, or everlasting God? [Davies,B]
- 15196 Is God within, or outside of time? [Le Poidevin]

6. Divine Morality

relationship between God and morality

a. Divine morality

20773 Justice originates in Zeus and in nature [Chrysippus]
5752 Why God and evil; why good and no God? [Boethius]
19344 God values lion-kind about individual men? [Leibniz]
6254 Why must we obey our divine benefactor? [Hutcheson]
6255 Maybe God has a moral sense like ours [Hutcheson]
16006 Abraham: murderer, or above ethics? [Kierkegaard]
7158 A nice God is particularly unbelievable [Nietzsche]
7199 Inventing God evades the hard questions [Nietzsche]
4488 Atheists cling more strongly to morality [Nietzsche]
20701 Is God good, if goodness is not maximum? [Davies,B]

b. Euthyphro question

4013 And God saw that the light was good [Anon (Tor)]
1657 For Socrates morality binds gods and men [Vlastos]
336 Do the gods love piety, or create it? [Plato]
337 The gods have no choice about what is pious [Plato]
2627 Justice may depend on reverence for the gods [Cicero]
1515 Pythagoreans base morality on religion [Iamblichus]
7399 Without religion, there are moral guides [Bacon]
6892 Morality is partly valid without God [Grotius]
19330 Denying God's justice undermines his love [Leibniz]
5642 Religion requires a prior conscience [Shaftesbury]
18242 Confucius offers non-revelatory ethics [Wolff]
5633 We infer God from duties, not duties from God [Kant]
8046 Obedience to God needs prior standards [Kant]
3721 We judge a priori whether God is good [Kant]
6199 Obligation depends on reason, not on God [Kant]
3780 Assessment of God's will needs morality [Bentham]
19454 God's virtues don't begin in God [Feuerbach]
2609 It isn't tautological that God is good [Russell]
4350 Would loss of faith destroy your morality? [Hursthouse]

c. God is the good

1662 Socrates felt god was incapable of evil [Vlastos]
2058 God is the ideal of morality, and our model [Plato]
6291 No one is good except God [Jesus]
8141 Evil-doers have not seen God [John]
8140 God is love [John]
5757 God is above any source of goodness [Boethius]
5758 God is the good [Boethius]
4825 There is no goal beyond God [Spinoza]
6250 God is good because he seeks human happiness [Hutcheson]
8105 The idea of God is needed for full virtue [Joubert]
20702 God may have a higher form of good [Davies,B]

d. God decrees morality

8004 To obey the law is to obey god [Plato]
3042 Law and right reason are identical with Zeus [Chrysippus]
5965 Zeus and nature produce justice [Chrysippus]
2651 Nature is subject to God, not vice versa [Cicero]
8010 Morality consists of God's commands [William of Ockham]
3637 God gives value to his own ideas [Descartes]
6223 Can God command that wickedness becomes good? [Cudworth]
6226 God's authority precedes his commands [Cudworth]
12570 The weak must obey the supreme [Locke]
6249 Is divine goodness just a tautology? [Hutcheson]
7577 Teleological suspension of ethics is possible [Kierkegaard]
7162 Morality needs God and the hereafter [Nietzsche]
4502 Morality cannot survive without God [Nietzsche]
3845 Without God there is no value in things [Sartre]
4009 Nominalism says morality resides in God [Taylor,C]
20703 What could bestow duties on God? [Davies,B]

B. Proving God

1. Proof of God

using reason to convince of God's existence

16165 God is an axiom, for which there is no proof [Aristotle]
12565 We have no innate idea of God [Locke]
19328 Proof of God needs Sufficient Reason [Leibniz]
3950 God must exist to perceive things [Berkeley]
3951 My mind couldn't function without God [Berkeley]
6957 Theology is too big for humans [Hume]
5607 There are just three proofs of God's existence [Kant]
21775 God is only knowable a priori [Hegel]
18991 If the God hypothesis works, it's true [James]

20694 Natural theology is universal rational proof [Davies,B]

2. Proofs of Reason

using pure reason to convince of God's existence

a. Ontological Proof

234 Some knowledge is required of all our ideas [Plato]
13227 Being is better than not-being [Aristotle]
2633 All minds have an idea of gods, so they exist [Epicurus]
20810 The cosmos is supreme, so it is rational [Zeno of Citium]
2634 We all have an innate idea of the divine [Cicero]
21241 Even fools can understand 'supreme being' [Anselm]
21242 An ultimate being that exists is greater [Anselm]
21244 A greater than God is an absurdity [Anselm]
21243 Inconceivable non-existence is the greatest [Anselm]
1421 Necessary existence is a perfection [Malcolm]
21245 Deny the word, but not the reality of 'God' [Anselm]
21246 Must a perfect island exist, if we imagine it? [Anselm]
21247 The supreme thing can have no start or end [Anselm]
2268 All ideas must originate in some first idea [Descartes]
2274 The idea of God is His trademark in me [Descartes]
2287 Existence is essential to the idea of God [Descartes]
2288 Existence is a perfection, necessary to God [Descartes]
3639 Necessary existence is God's unique property [Descartes]
3640 Possible existence is perfection of a triangle [Descartes]
17169 I conceive something essentially existing [Spinoza]
21856 An infinite attribute substance must exist [Spinoza]
17178 Denial of a necessary God is absurd [Spinoza]
21858 God is being, so must exist [Spinoza]
4820 God's non-existence is inconceivable [Spinoza]
3889 God is either necessary or impossible [Leibniz]
2116 Existent things have an enlarged concept [Leibniz]
19325 God provides necessity for things [Leibniz]
2113 God must exist if He is possible [Leibniz]
4188 All of Hegel is based on the Ontological Proof [Schopenhauer]
15633 Abstraction of thinking give being to God [Hegel]
6913 God can only be thought of as existing [Feuerbach]
3307 Apply the ontological argument to numbers [Frege]
1422 God is either necessary or impossible [Malcolm]
20704 If possible in one world, then in all [Plantinga]
3308 'There is no God' leads to contradiction [Benardete,JA]
4066 'Exists' sometimes is a predicate [Crane]
19653 A necessary God ensures an external reality [Meillassoux]

b. Ontological Proof critique

12278 Being is predicated of everything [Aristotle]
1688 Existence is not the essence of anything [Aristotle]
2636 Primitive people have no concept of gods [Cicero]
1892 Disputes show God's existence isn't obvious [Sext. Empiricus]
1420 Real existence is not a perfection [Malcolm]
21251 God's essence isn't obvious to us [Aquinas]
1864 Heretics say we can know God's essence [Anon (Par)]
3632 We are unable to form an idea of God [Hobbes]
3633 We cannot conceive an infinite being [Gassendi]
5036 A perfect being might be contradictory [Leibniz]
3638 Existence permits perfection, but isn't one [Gassendi]
4817 Non-existence is possible if conceivable [Spinoza]
2244 Negation of existence can't be a contradiction [Hume]
21255 A thing's non-existence can't be contradictory [Hume]
8451 Existence comes from the word 'is' [Kant]
3321 Existence is a quantifier, not a predicate [Benardete,JA]
13732 Kant allows 'exist' to be a predicate [Kant]
5609 'This exists' may be a miserable tautology [Kant]
5608 Is 'this exists' analytic or synthetic? [Kant]
5610 You can negate existential propositions [Kant]
5611 Existence is not a predicate [Kant]
5612 'God is' adds nothing to His concept [Kant]
7741 'Exists' is actually a quantifier [Frege]
8644 Existence is of concepts, not of things [Frege]
8491 Existence isn't a first-level concept [Frege]
18312 'God' is compatible empty general concepts [Nietzsche]
5773 A false quantifier grounds the ontological arg [Russell]
6119 'God' is a description, not a name [Russell]
5187 Predication presupposes existence [Ayer]
17573 Mere existence is not valuable [Inwagen]
6072 The most imperfect being can't exist [McGinn]
6073 Is a 'supremely perfect being' well-defined? [McGinn]
3905 'Existence' is a predicate of predicates [Scruton]

15133 Necessary existents have necessary singletons [Williamson]
7417 Which of God's perfections are absurd? [Joslin]

c. Moral Argument

20714 God is not proved, but postulated [Kant]
1453 We must believe in a cause of justice [Kant]
1455 Belief in justice requires a religion [Kant]
1458 Conduct is only reasonable in a rational world [Rashdall]
1459 Absolute morality can only exist in one Mind [Rashdall]
20713 Worship is moral slavery, and impossible [Rachels]

d. Pascal's Wager

7455 You can make a belief more probable [Pascal]
7456 Living piously sacrifices pleasure [Hacking]
7457 Pascal assumes God is fifty percent likely [Hacking]
6684 Winner gets everything, loser loses nothing [Pascal]
6946 False belief in heaven is pleasant and safe [Peirce]
7985 Hypothesising God is just more fun [Baudrillard]

3. Proofs of Evidence

proving God's existence from observed facts

a. Cosmological Proof

8144 Brahman is the Uncaused Cause [Anon (Upan)]
21257 The supreme motion is self-generating [Plato]
21258 All motion must begin with self-generation [Plato]
21261 The oldest thing must be self-moving soul [Plato]
5699 Non-everlasting matter would have gone [Lucretius]
5760 God is the power which supports creation [Boethius]
5614 Which being is the necessary being? [Kant]
21269 Way1: movement needs a First Mover [Aquinas]
21270 Way2: causation requires a First Cause [Aquinas]
21271 Way3: contingent things need a necessary being [Aquinas]
21272 Way4: perfections derive from a maximal thing [Aquinas]
22124 Creation doesn't imply an infinite God [Duns Scotus]
3634 A first cause doesn't follow from my ignorance [Descartes]
12566 Our own being requires eternal being [Locke]
19418 All motion points to a Prime Mover [Leibniz]
2099 The Principle of Sufficient Reason proves God [Leibniz]
21254 The whole chain of events needs a single cause [Hume]
1435 Could the universe necessarily exist, not God? [Hume]
5598 You can't prove the uncaused from causes [Kant]
6205 You need to be omniscient to prove God [Kant]
20706 The cause of the material must be non-material [Davies,B]

b. Teleological Proof

1499 The gods are the source of human intelligence [Heraclitus]
480 Mind is the source of all creation and order [Anaxagoras]
274 Soul causes all pairs of opposite qualities [Plato]
21263 A good soul controls rational nature [Plato]
13226 An Order controls all things [Aristotle]
610 World order requires something eternal [Aristotle]
2649 If olive trees bear flutes, they know music [Zeno of Citium]
5993 The scale of life requires a perfect being [Cleanthes]
2647 Someone is obviously in control in a gymnasium [Cicero]
2650 The power of God is obvious in the stars [Cicero]
2655 Even barbarians see design in machines [Cicero]
2656 Creation of the world by luck is ridiculous [Cicero]
20695 God is visible in what has been created [Paul]
21808 Soul is author of all of life [Plotinus]
5753 Regular events could not result from chance [Boethius]
6819 Allah made night for rest and day for light [Mohammed]
21273 Way5: mindless things are guided to an end [Aquinas]
17024 Elegant planets mean intelligent design [Newton]
2595 One source makes substances agree [Leibniz]
19417 Pre-established harmony is a proof of God [Leibniz]
19329 Laws of physics are evidence for God [Leibniz]
3949 God is proved from beauty and utility [Berkeley]
6962 We should see God wherever the order is [Hume]
21275 We infer design from a watch's structure [Paley]
21276 We infer a designer from the watch's design [Paley]
21277 Imperfect machines still show design [Paley]
21278 Like a watch, nature shows designed features [Paley]
21357 The eyelid shows obvious purpose [Paley]
1451 Ideas, values, laws and beauty suggest design [Tennant,FR]
20707 Design appears in purpose or regularity [Davies,B]

c. Teleological Proof critique

1535 People invent gods to explain awesome events [Democritus]
1555 People treat natural benefits as gods [Prodicus]
5707 Gods didn't create this imperfect universe [Lucretius]

2657 Fever isn't divine just because it is regular [Cicero]
2232 Causes can't be greater than their effects [Hume]
6960 Analogy suggests God is like humans [Hume]
6958 Can you infer a whole from a glimpsed part? [Hume]
6963 If creation is finite, why is God infinite? [Hume]
6964 We can't judge the faults of the universe [Hume]
6965 Trial-and-error may have created the universe [Hume]
21279 Our observations are finite,so God must be too [Hume]
21281 The universe may result from long practice [Hume]
21280 Judging makers from their works is deceptive [Hume]
21282 Design may be achieved by a team of gods [Hume]
21283 Why are gods not sexual, like us? [Hume]
21284 Are the gods infants or incompetent or senile? [Hume]
6966 The universe resembles irrational vegetation [Hume]
6967 Irrational spiders can produce ordered webs [Hume]
21286 Motion begins in matter, with no agency [Hume]
21287 An undesigned universe can settle into order [Hume]
21288 External ideas never influence matter [Hume]
21256 Number patterns look designed, but aren't [Hume]
6204 God is too obscure to explain design [Kant]
6206 We know that God is impressive but not supreme [Kant]
21332 Nature teaches us chaos, not order [Mill]
18977 Wonderful design can look diabolical [James]
18979 Any slight structure appears designed [James]
20708 An orderly being cannot explain order [Davies,B]

d. Religious Experience

20312 God can only be learned inwardly [Kierkegaard]
18976 Experience is the main evidence for God [James]
20710 Experience of God needs abnormal states? [Davies,B]
20711 Experience the world as God-filled? [Davies,B]
20709 Needs consistency, universality, testability [Davies,B]

e. Miracles

20716 False prophets will perform wonders [Mark]
5974 Many impossibilities have been reported [Plutarch]
7902 The Buddha did miracles, to impress people [Mahavastu]
4868 Miracles are too obscure to prove God [Spinoza]
4827 Natural understanding of miracles is 'heresy' [Spinoza]
12571 Good miracles need to be surprising [Locke]
5030 Miracles are part of divine design [Leibniz]
12909 Even miracles belong to order [Leibniz]
12784 Keep miracles to a minimum [Leibniz]
7636 Why prefer irrational laws to miracles? [Ishaq]
2227 Miracles contradict our strongest experience [Hume]
2228 A 'miracle' must be contrary to all experience [Hume]
2229 Miracles need unusually reliable testimony [Hume]

C. Attitudes to God

1. Monotheism

view that there is just one god

7598 Zoroaster and Hebrews developed monotheism [Zoroaster]
1782 God is one, though known by many names [Chrysippus]
2638 The gods can't all be equally beautiful [Cicero]
7605 With monotheism came intolerance [Armstrong,K]

2. Pantheism

view that God and nature are identical

8152 Earth, food, fire, sun are forms of Brahman [Anon (Upan)]
2631 There is one god, and it is nature [Antisthenes (I)]
20807 The cosmos is the substance of god [Zeno of Citium]
6038 God is matter, or is inseparable from it [Stoic school]
18461 Everything that exists is within divinity [Porphyry]
7256 The Supreme Being is identical with Nature [More,T]
12757 God is not the substance of all things [Leibniz]
17180 Everything must involve God [Spinoza]
17181 God causes existence and essence [Spinoza]
4829 Our minds are part of God's intellect [Spinoza]
19408 Pantheism is a pernicious doctrine [Leibniz]
7580 Pantheism blurs good and evil [Kierkegaard]

3. Deism

belief in a remote and detached God

22089 I am a God close at hand [Jeremiah]
1558 There would be justice if gods cared for us [Thrasymachus]
14 The gods may be non-existent or indifferent [Plato]
1828 God has no role in heavenly movements [Epicurus]
5710 The gods are indifferent to humans [Lucretius]

4. God Reflects Humanity

God as a projection of humanity's own image

1500 We can only see gods as extensions of ourself [Plato]
2802 We imagine gods with human shape and lives [Aristotle]
2635 Gods require reason, which needs human form [Cicero]
19085 Visualising God as human is a mistranslation [Maimonides]
9112 We abstract divine wisdom from creatures [William of Ockham]
7411 The attributes of God show our ignorance [Hobbes]
7830 Triangles would think God triangular [Spinoza]
2185 God is an augmentation of human virtues [Hume]
6202 God is usually just human qualities [Kant]
6917 God is the essence of thought [Hegel]
19452 God's nature expresses humanity [Feuerbach]
6903 The essence of man is revealed in God [Feuerbach]
6911 God is an empty idea filled by man [Feuerbach]
6923 God is what man would like to be [Feuerbach]
19603 God is both boring and inhuman [Cioran]
7470 When civilization began, gods became male [Watson]

5. Atheism

denial of the existence of any gods

14829 Homer appears to be deeply irreligious [Homer]
407 Mortals imagine gods as like themselves [Xenophanes]
408 Gods look like their own nation [Xenophanes]
5956 Anaxagoras said the sun was a stone [Anaxagoras]
7488 Anaxagoras was the first recorded atheist [Anaxagoras]
1551 Protagoras' agnosticism was really atheism [Diogenes of Oen.]
542 Fear of gods was invented to stop secret sin [Critias]
338 Seeing the cosmos as physical leads to atheism [Socrates]
1543 The gods are merely exalting the good in life [Prodicus]
535 Gods are just personified human benefits [Prodicus]
149 There is no sound reason for believing in gods [Plato]
278 Seeing necessity in the cosmos causes atheism [Plato]
2632 Some animal force governs us, not the gods [Speusippus]
3029 A manmade statue cannot be a god [Stilpo]
2639 Some say Epicurus was really an atheist [Epicurus]
5731 Thunderbolts never come from blue sky [Lucretius]
2641 Why believe in gods if you haven't seen them? [Cicero]
5957 Superstitions make people prefer atheism [Plutarch]
16712 Atheism should never be tolerated [Descartes]
3660 Atheism arises from desire to perceive God [Descartes]
7836 'Nature' could replace Spinoza's 'God' [Spinoza]
7842 Leibniz was more atheist than Spinoza [Leibniz]
19453 If God's qualities are human, so is he [Feuerbach]
2931 God is dead [Nietzsche]
18298 Gods are just unacceptable! [Nietzsche]
2887 Atheism can be an instinct rather than reason [Nietzsche]
2906 Denying God saves us from accountability [Nietzsche]
7626 I do not believe in a personal God [Einstein]
5207 Theism and atheism are non-sensical [Ayer]
15295 Theism should explain things [Harré/Madden]
8243 Atheism is philosophy's achievement [Deleuze/Guattari]
19658 Unthinkable absolute makes atheism religious [Meillassoux]

29. Religion

A. Polytheistic Religion

1. Animism

belief that many spirits inhabit parts of nature

21265 All things are full of gods [Plato]
20664 All of nature is aware, and communicates [Harari]

2. Greek Polytheism

early Greek religion, centred on Zeus and others

1742 The gods know evil deeds and thoughts [Thales]
15659 Purifying yourself with blood is crazy [Heraditus]
1522 Everyone should think clearly about the gods [Empedocles]
12097 There are many unmoved movers [Aristotle]
9287 Egyptian magic is the true religion [Bruno]
14864 Greeks have individual poetic theologies [Nietzsche]
14827 Greek gods were ideals, not masters [Nietzsche]
7208 Paganism thanks and affirms life [Nietzsche]
7348 Greeks try to merge human and divine [Johnson,P]
20668 Most polytheist recognise one supreme power [Harari]
20667 Polytheism is inherently tolerant [Harari]
20665 Myths are contracts, to control nature [Harari]

3. Hinduism

Indian polytheism, including reincarnation

8156 Worship the gods for the sake of the Self [Anon (Upan)]
8157 Rebirth continues until desire is stilled [Anon (Upan)]
8159 Damayata! Datta! Dayadhwa! [Anon (Upan)]
8145 Ignorance of Atman leads to rebirth [Anon (Upan)]
7993 Brahman first, then Atman and Karma [Anon (Bhag)]
5350 Hindu's reincarnation is a very late idea [Flanagan]
7599 Teachers superseded gods c.800 BCE [Armstrong,K]
7474 Hinduism has no founder or organisation [Watson]

4. Dualist Religion

religions based on two opposed gods

552 Good and evil are basic principles of reality [Empedocles]
21262 There must be good and evil world-souls [Plato]
20669 Everything is a battleground of good and evil [Harari]
20670 Dualist religion can't explain cosmic order [Harari]
20673 Good made spirit, evil made flesh [Harari]

B. Monotheistic Religion

1. Monotheism

general idea that there can only be one god

20671 One evil creator explains evil and order [Harari]
20668 Monotheism began 1350 BCE in Egypt [Harari]

2. Judaism

followers of one god with a chosen people

7604 Amos introduced justice and compassion [Amos]
19934 The Hebrew theocracy was very hostile [Spinoza]
7663 Family is basic to Judaism and Christianity [Berlin]
7336 The key idea is of a single moral God [Johnson,P]
7341 Religious heroes begin as outlaws [Johnson,P]
7342 Isaiah made Judaism a universal religion [Johnson,P]
7345 In exile the Jews became a nomocracy [Johnson,P]
7344 Seven components of Judaism [Johnson,P]
7355 The Torah was the blueprint of creation [Johnson,P]
7597 There is no monotheism in the Pentateuch [Armstrong,K]
7479 Judaism stabilised in 200 CE [Watson]
7481 Was monotheism to justify land claims? [Watson]
7480 In the Middle East the Jews created monotheism [Watson]
20929 God dictated the Torah to Moses [Zimmermann,J]

3. Zoroastrianism

ancient Persian, with one god, and Zoroaster as prophet

7472 Zarathustra offered the first abstract god [Zoroaster]
20672 God and evil gods fight for the world [Zoroaster]
7347 There is one beneficent spiritual Creator [Johnson,P]
7471 Zoroastrianism dates from about 1000 BCE [Watson]
7473 Most elements of religion come from Zoroaster [Watson]

4. Christianity

worship God through his revelation in Jesus

a. Christianity

7351 Jesus reduced theology to morality [Jesus]
1867 Christians claim Jesus is a new kind of logos [Celsus]
6818 Allah has no son; he is self-sufficient [Mohammed]
20211 The Beatific Vision - happiness plus truth [Aquinas]
9115 Love whatever God wills to be loved [William of Ockham]
7252 True Christians are made to be slaves [Rousseau]
8102 You either love Christianity or hate it [Joubert]
6915 Hegel was trying to restore Christianity [Hegel]
6686 Hegel gave a rationalisation of Christianity [Hegel]
21798 Giving all to the poor is absurd [Hegel]
4178 Christianity equates the world with evil [Schopenhauer]
6902 Protestantism concerns man more than God [Feuerbach]
7216 Old Testament values corrupt the Gospel [Mill]
16008 Christianity is best without 'Christianity' [Kierkegaard]
20735 Christianity cannot be understood [Kierkegaard]
14813 Science rejects Christianity for Epicurus [Nietzsche]
14832 Jesus splits human nature in two [Nietzsche]
14837 Christ favoured the intellectually weak [Nietzsche]
14850 Christ was the noblest human being [Nietzsche]
20245 Christianity wanted a short cut to perfection [Nietzsche]
20247 Christianity rests on heathen rituals [Nietzsche]
2867 Christianity is Platonism for the people [Nietzsche]
7160 The pleasure of Christianity keeps it going [Nietzsche]
4499 Early Christians sought to abolish the state [Nietzsche]
2901 Christianity was always against intelligence [Nietzsche]
2917 Christianity is humility denying the elevated [Nietzsche]

18325 Only God knows the good for man? [Nietzsche]
20719 Punish heretics, but indulge sinners [Weber]
7606 The idea that Jesus was God came later [Armstrong,K]
9272 Without Christianity history loses meaning [Gray]
9279 What are original sin and redemption? [Gray]
7483 Paul mentions little drama from Jesus' life [Watson]
7484 Jesus never intended to start a new religion [Watson]
20737 Protestants emphasise the inner self [Aho]

b. Transubstantiation

16642 Transubstantiation splits accident/substance [Pasnau]

c. Angels

22106 Angels are forms, not spiritual matter [Aquinas]
16679 Even an angel must have some location [William of Ockham]
16682 Angels could colocate with other things [Suárez]
16772 An angel with a body feels no pain [Descartes]
16689 How many angels on a needle-point? [More,H]

d. Heresy

16713 Philosophers are the forefathers of heretics [Tertullian]
22116 Augustine named three main heresies [Augustine]
16711 Heretics should be killed [Aquinas]
16714 Blasphemous heretics should be killed [Erasmus]

5. Bible

authority of the main Christian texts

4300 The Bible and reason are separate [Spinoza]
2918 Genesis shows God's terror of science [Nietzsche]
8008 The Bible is God's story;humans are incidental [MacIntyre]

6. Islam

worship one God, with Mohammed as prophet

6829 There shall be no compulsion in religion [Mohammed]
6834 Ignore the ambiguous parts of the Koran [Mohammed]
6831 Knowingly killing a believer leads to Hell [Mohammed]
6827 Make war on the unbelievers [Mohammed]
6817 The Koran is inimitable and divine [Mohammed]
6824 Do not split your religion into sects [Mohammed]
6821 I created mankind to worship Me [Mohammed]
6815 Leave unbelievers to the judgement of Allah [Mohammed]

C. Spiritual Disciplines

1. Confucianism

traditional Chinese set of rules for living

7475 Confucius was spiritual in a remote way [Watson]

2. Taoism

suppress desire and reestablish unity with the cosmos

7288 Go with the flow, and be one with the void [Chuang Tzu]
7287 People forget each other in the Tao [Chuang Tzu]
19616 Taoism is superior to all of philosophy [Cioran]
7476 Escape world, body, mind and nature [Watson]

3. Buddhism

attempt to rise to a pure life by elimination of desire

7600 Nirvana is much higher than the gods [Buddha]
7601 Compassion, truth and sobriety save us [Buddha]
7900 Be mild, honest and generous [Anon (Dham)]
7904 Stage one is calm amidst discursive thinking [Ashvaghosha]
7905 Seek reality and the final goal [Ashvaghosha]
7909 Eight steps to morality, wisdom, tranquility [Ashvaghosha]
7607 The world of experience is an illusion [Nagarjuna]
18990 Buddhists are frightened of experience [James]
7901 A Buddha is a fully enlightened one [Conze]
21832 No God or self; wisdom can escape suffering [Flanagan]
20766 Four Truths about suffering [Aho]

4. Zen Buddhism

achieve radiant wordless enlightenment by meditation

8227 Feel the cosmic essence within you [Anon (Cent)]
8229 The serenity in blue sky beyond clouds [Anon (Cent)]
8231 Feel the joy of being everywhere [Anon (Cent)]

D. Religious Issues

1. Religious Commitment

states of mind involved in religious belief

a. Religious Belief

8149 Charity & ritual aren't the point of religion [Anon (Upan)]
1501 Praying to statues is totally futile [Heraclitus]
14527 Lets hope gods don't answer our prayers [Epicurus]
5955 A city without religion is impossible [Plutarch]

8139 Do not love the world [John]
2365 Religion is based on fear and ignorance [Hobbes]
19437 Prayer is useful, as God foresees it [Leibniz]
19576 Religious feeling needs an intermediary [Novalis]
4180 Religion clothes our mysteries in myth [Schopenhauer]
21472 Religion elevates the uneducated [Schopenhauer]
19449 Religion is consciousness of the infinite [Feuerbach]
19455 Today's atheism is tomorrow's religion [Feuerbach]
6905 Leibnizian theism brings absolute idealism [Feuerbach]
7128 Religion is the opium of the people [Marx]
5299 Religious feeling is social in origin [Marx]
14828 Religions suits those with boring lives [Nietzsche]
4410 The greatest haters are priests [Nietzsche]
19600 After religion, man creates fake gods [Cioran]
19643 Religion must be intolerant and ruthless [Cioran]
5320 Mankind has produced 100,000 religions [Wilson,EO]
12317 God of religion results from encounters [Badiou]
6706 Religions focus on religion more than morality [Graham]
7819 There are four explanations of religion [Grayling]
7463 The soul, seers and ritual are basic [Watson]

b. Religious Meaning

4151 Theology is ontology through grammar [Wittgenstein]
1468 Commitment gives religious language meaning [Braithwaite]
1466 God is neither verifiable nor falsifiable [Flew]
20697 Talk of God does not need full understanding [Davies,B]

c. Religious Verification

5209 Religion is not literally significant [Ayer]
1470 Verification of religion can come after life [Hick]
1471 Immortality is a vague but intelligible idea [Hick]

d. Religious Falsification

1465 Only evidence can prove a divine 'gardener' [Flew]
1467 Could anything prove God does not love us? [Flew]
1469 Open-ended claims cannot be falsified [Hick]

e. Fideism

8158 It is pointless to seek Brahman by arguments [Anon (Upan)]
7997 Men can only come to Krishna through love [Anon (Bhag)]
17593 Be ready with reasons for your beliefs [Peter]
6610 I believe because it is absurd [Tertullian]
6609 Reason is a blind whore [Luther]
22088 Faith is a leap, going up and down again [Kierkegaard]
7584 Without risk there is no faith [Kierkegaard]
7583 Faith is the peak of human subjectivity [Kierkegaard]
202691 believe because I am absurd? [Nietzsche]
2919 Faith is not wanting to know the truth [Nietzsche]
7596 Faith is putting trust in our beliefs [Armstrong,K]
4727 Fideist have problems with other fideists [O'Grady]

2. Immortality

possibility that human souls can survive death

a. Immortality

5883 Pherecydes said the soul is eternal [Pherecydes]
7469 There is no hereafter in the Book of Job [Anon (Job)]
7467 Pythagoras created the modern 'soul' [Pythagoras]
8233 Imagine you body destroyed, but not you [Anon (Cent)]
1513 Egyptians first claimed the soul is immortal [Herodotus]
20915 The soul is destroyed with the body [Democritus]
363 Soul is immortal if it knows ultimate reality [Plato]
146 Soul is self-moving, and so immortal [Plato]
20829 The virtuous endure the longest [Stoic school]
6039 Wise souls last long, but foolish souls fade [Stoic school]
7482 Resurrection appears in Judaism in 160 BCE [Anon (Dan)]
5888 Souls are born so they must perish [Panaetius]
5720 Spirit is mortal [Lucretius]
5722 How could spirits sense things without organs? [Lucretius]
5725 Immortal mind and mortal body is incompatible [Lucretius]
5765 The reward of the good is to become gods [Boethius]
1863 My soul's immortality may not be mine [Aquinas]
2378 Immortality is just a distant rumour [Hobbes]
7831 Dual aspect monism denies immortality [Spinoza]
21876 Something of us survives death [Spinoza]
12912 Immortality needs memory [Leibniz]
21296 Without perceptions, I cease to exist [Hume]
21797 Immortality is the pure knowing of Spirit [Hegel]
2916 The lie of immortality kills reason & instinct [Nietzsche]
7349 Egyptians proposed judged immortality [Johnson,P]
7354 Pharisees believed in an afterlife [Johnson,P]

6709 Westerners want immortality,the East dreads it [Graham]
7817 Denigrate this life, to praise the afterlife [Grayling]
7818 Originally only heroes go to heaven [Grayling]
5505 Aristotle's psyche is mostly mortal [Martin/Barresi]
7468 Athenian dead souls go to the 'upper air' [Watson]

b. Soul

8146 Our immortal part is awake during our dreams [Anon (Upan)]
8150 Immortal & individual self are like two birds [Anon (Upan)]
2165 To be immortal, the soul must be a unity [Plato]
20830 Incorporeal soul can't be part of body [Chrysippus]
5721 Mind is tiny particles that evaporate at death [Lucretius]
5723 Why can't the immortal soul remember its past? [Lucretius]
21811 The soul is secondary to Nous [Plotinus]
18449 Body joins to soul; soul can detach from body [Porphyry]
18457 Souls are separate but connected [Porphyry]
3652 Soul can survive death, even if destructible [Descartes]
12917 Soul is indestructible and self-aware [Leibniz]
7649 The soul is no more than our thinking part [La Mettrie]
20264 Soul is inwardly graceful behaviour [Nietzsche]
4159 The body is the best picture of the soul [Wittgenstein]
9292 The Soul has no particular capacity [Teichmann]
9294 How do you distinguish two Souls? [Teichmann]
5352 Essential natural kinds make the soul possible [Flanagan]

c. Animal Souls

12918 Animals have souls but no consciousness [Leibniz]
5058 Animals have thought and souls [Leibniz]

d. Heaven

13 People are only virtuous for the rewards [Plato]
7908 Heaven is ceasing to be disturbed [Ashvaghosha]
6820 Paradise is marriage to dark-eyed hours [Mohammed]
6812 Heaven is eating fruit served by virgins [Mohammed]
4412 Bliss is increased by watching damnation [Aquinas]
18288 Heaven was invented by the sick [Nietzsche]
18306 Seek the kingdom of earth - not heaven! [Nietzsche]
7203 In heaven all the interesting men are missing [Nietzsche]
18318 Life-haters create heaven as a revenge [Nietzsche]
21520 Overwork produces a boring idea of heaven [Russell]
20699 Paradise would not contain some virtues [Davies,B]
7356 Heaven is a vast library [Johnson,P]

e. Hell

7998 Three gates of hell are lust, anger and greed [Anon (Bhag)]
6830 Unbelievers will be endlessly burned [Mohammed]
6816 Unbelievers shall drink boiling water [Mohammed]
19623 Hell having circles is ridiculous [Cioran]

3. Problem of Evil

why a benevolent powerful god would permit evil to exist

a. Problem of Evil

2057 There must always be evil opposed to good [Plato]
2659 There is little justice in the world [Cicero]
20698 Evil is needed for free choice and development [Irenaeus]
5761 If God cannot do evil, it must be nothing [Boethius]
5766 This is no evil in the plan of Providence [Boethius]
21266 A good and infinite God should not allow evil [Aquinas]
21274 God brings goodness out of the evil [Aquinas]
19339 Evil is non-good, coming from non-being [Leibniz]
13164 God allows sin to derive greater good [Leibniz]
19337 A perfect being allows evil and injustice? [Leibniz]
19345 God is good, so disregard the local evils [Leibniz]
19340 Evil is imperfection, suffering, or sin [Leibniz]
6737 Evil is good when linked to all of existence [Berkeley]
21468 God should have made better possibilities [Schopenhauer]
21335 Wanting a just afterlife implies injustice now [Mill]
21333 Evil comes from good as much as vice versa [Mill]
21334 Omnipotent God seems to will misery [Mill]
7200 Powerful goodness would abolish evil [Nietzsche]
1473 God and evil cannot be logically reconciled [Mackie]
1472 Evil won't fit with God's benevolent power [Mackie]
2175 Evil is only a problem if you expect good [Williams,B]

b. Human Evil

2658 Why didn't the gods give us good reason? [Cicero]
19338 Evil is unreal; it is limited goodness [Augustine]
5037 Sinful Adam's existence was preferred [Leibniz]
5050 Evil helps greater good and higher pleasure [Leibniz]
3956 People have enough autonomy for responsibility [Berkeley]
1474 Moral evil may be needed to achieve free will [Plantinga]

c. Human Error

- 443 Human wisdom is based on divine law [Epicharmus]
2277 My judgement makes no errors, if well used [Descartes]
2278 A finite judgement is bound to make errors [Descartes]
3636 Why is our mind inadequate for good living? [Gassendi]

d. Natural Evil

- 2120 God is responsible for good but not for bad [Plato]
21404 Terrible events are useful to the whole [Chrysippus]
1893 Evil shows God lacks foreknowledge [Sext. Empiricus]
2281 We should judge the whole universe, not parts [Descartes]
3955 There is no sin in purely physical events [Berkeley]
21328 Nature cruelly inflicts the crime of murder [Mill]
21329 Nature is mercilessly and unjustly cruel [Mill]
21330 Childbirth is miserable, and often fatal [Mill]
21331 Hurricanes and disease cause huge famines [Mill]
1475 Physical evil could be the work of Satan [Plantinga]