Overview
Essay Questions
Analysis?
Logic?
Inference?
Argument?
Assignments

Week 1: Introduction

Takaharu Oda, PhD (odat@tcd.ie)

Southern University of Science and Technology

SS149 (社会科学中心), Spring 2024

Early Modern Western Philosophy (17^{th}-18^{th} Centuries)

近代西方哲学（十七–十八世纪）

Week 1: Introduction

1 Overview and Assessments

2 Essay Questions

3 Analytic Philosophy, not Continental

4 Introduction to a Logical System

5 Three Modes of Inference—Deduction, Induction, & Abduction

6 Formulating an Argument in Premiss-Conclusion Form

7 Assignments for the Next Lecture

Overview and Assessments

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SS149 Course Objectives

16 weeks (32 hours) of teaching on Early Modern Philosophy

- Part 1 Seventeenth-century Western philosophers: weeks 1–7
- Part 2 Eighteenth-century Western philosophers: weeks 8–14
- Part 3 Your presentation and open discussion: weeks 15–16

Specifically, this course aims to help the students:

1. Understand knowledge of **philosophical and logical thinking** by reading and discussing the historical texts;
2. Develop comprehensive understanding of the study of philosophy and its history, deeply embedded in the Western intellectual culture in the **early modern to Enlightenment period** (i.e. 17–18th centuries);
3. Master **critical writing skills and logical analysis**, which apply practically to a variety of scientific researches and one's ordinary life. This captures one's capable learning and value of philosophy in the university life.

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Learning Outcomes

Upon completion of this course, students are expected to:

1. Read early modern philosophical texts in their historical context.
2. Describe some main differences between major philosophers and schools of early modern philosophy.
3. **Critically evaluate** philosophical arguments and theories found in early modern philosophical texts.

Course Contents and Grading Criteria:
See the Specification and Syllabus (Blackboard)

Assessments

4 Types	100%	Notes
Attendance	26%	TA counts during Weeks 4–16 **twice** per class (+1x2 every week x13).
Performance	4%	Raising or answering questions are encouraged and will be awarded a bonus (up to +4) for any critical and/or innovative debates. However, (i) ignoring communication with the lecturer and peer students (e.g. by **wearing earphones** and playing games) and (ii) keeping silence in the class (when the lecturer asks individually) will be penalised (0%).
Essay	50%	1500 words on one of the questions.
Presentation	20%	Approx. 10 minutes in Weeks 15–16.

For more details, see the **Assessment Plan & Grading Rubric** (for Courses with Letter Grading System)

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1. If you have a valid reason for absence, please fill in the student system formally. Otherwise, your attendance is counted as 0 in 2% of the week that you are absent.
2. At minimum, 10 classes of attendance are required (during 13 weeks 4–16). Contact a TA just in case.
3. Those who miss more than three classes (i.e. **four or more**) since Week 4 will fail all 26%.

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1. A philosopher's `valid` argument in premiss-conclusion form
2. An opponent's objection to a `premiss` of the above argument
3. Your critical evaluation of why the argument is `sound or unsound` based on the raised objection

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Condition 0

1. Only the recommended (primary and secondary) **references** are permitted to use in your essay and presentation *both*.
2. The recommended **references** are uploaded and easily accessible.
3. If you use the other **references** (such as Wikipedia and Britannica), then marks are lower.
4. If you use the other **references**, then you need the permission of the lecturer beforehand.
5. ChatGPT etc. are allowed inasmuch as they are **referenced** (included in the bibliography).

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Essay/Presentation Deadlines and Conditions

Essay Deadlines for Spring 2024 via **Turnitin**

1. Essay (either Part 1 or Part 2 Question): Friday midnight (Week 14)
2. Presentation (**a given Question**): Tuesday midnight (Week 15/16)

Four **Essay** Conditions

1. The maximum length of each essay is **1,500 words** in English; anything longer cannot be considered.
   - It is **inclusive of footnotes and exclusive of bibliography**.
2. The (i) validity and (ii) soundness of a philosopher's **argument** (not your own!) in premiss-conclusion form must be examined.
   - Read the 'Argument Advice', and reconstruct a valid argument.
   - Discuss (i) *your* valid reconstruction and (ii) an *opponent*'s objection to a premiss (for unsoundness of the argument) with your TA, and then with me, in office hours: final slide
3. Citations and references (bibliography) ought to be consistent with one of the referencing styles, such as Chicago.
   - Add either **in-text citations** or footnotes, plus;
   - A list of 'references' at the end, also called 'bibliography'.

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Essay Questions in Part 1: C17th

1. Critically evaluate Descartes's 'wax argument' in the Second Meditation.
2. Critically evaluate Descartes's argument against one of the objections in the *Meditations*.
3. Critically evaluate Spinoza's argument against final causes, along with Leibniz's response to that argument.
4. Critically evaluate Cavendish's argument for the impossibility of transfer of motion.
5. Critically evaluate Cavendish's argument for panpsychism.
6. Critically evaluate Malebranche's argument for occasionalism.
7. Critically evaluate Locke's argument against the claim that the idea of God is innate.
8. Critically evaluate Locke's argument for the possibility of thinking matter, along with Astell's response to that argument.

Essay Questions in Part 2: C18th

1. Critically evaluate Berkeley's argument about occasional causes, compared with Malebranche's occasionalism.
2. Critically evaluate Berkeley's argument against one of the twelve objections in the *Principles*.
3. Critically evaluate Berkeley's argument about embodiment in the *Three Dialogues*.
4. Critically evaluate Berkeley's argument for mechanical causes as distinguished from metaphysical ones in *De motu*.
5. Critically evaluate Hume's argument about the uniformity of nature in his problem of induction (*Enquiry*, §4).
6. Critically evaluate Hume's argument that there is no idea of power or necessary connection (*Enquiry*, §7), along with Shepherd's response to that argument.
7. Critically evaluate Shepherd's argument for a necessary connection in the *Essay*, along with Hume's sceptical response to that argument.
8. Critically evaluate Reid's 'same shop' argument for trust in the senses.

Presentation Question in Part 3: Weeks 15–16

1. Critically evaluate an early modern philosopher's argument in premiss-conclusion form.

Conditions for your own presentation

- Chose your favourite philosopher to the extent to which Parts 1 and 2 cover.
- The presentation consists of your (i) textual reconstruction and (ii) `critical analysis` of a philosopher's **valid argument** in accordance with the above question.
- `Critically evaluate why the reconstructed argument is sound or unsound.`
- The argument and text must be different to those in your essay. Otherwise, penalised.
- Follow the same academic style as in essays, such as citations and quotations (sandwiched by `quotation marks`), together with a bibliography.

Presentation Question in Part 3: Weeks 15–16

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Philosophia ('love of wisdom') in pursuit of TRUTH

Division (?) in **contemporary** philosophy (since the end of C19th)

Analytic philosophy

- Mathematical rigour after Frege and Russell
- Logical empiricism, if not called 'empirical science'
- Clarity is a holy grail
- ***Analyzing* arguments (in premiss-conclusion form)**

Continental philosophy

- Anti-theoretical; idiosyncratic
- **Criticising arguments (not exactly assuming the form)**
- e.g. critical theory (Frankfurt School); phenomenology (esp. Heideggerian); psychoanalysis

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- an old way of division: 'rationalism' and 'empiricism'

This course in the history of early modern philosophy

– Simons, Mulligan, Smith 'What's Wrong with Contemoporary Philosophy?' (2006, 67); Beaney, 'Two Dogmas of Analytic Historiography' (2020); etc.

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Introduction to a Logical System

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Logical System: First-Order Predicate Logic

Syntax (uninterpreted signs/marks)

1. Vocabulary
2. Grammar
3. Proof

Semantics (interpretations)

4. Model (interpretation)
5. Truth-in-a-model
6. Model-theoretic definitions of validity (of an inference), consistency (of a set of formulas), **logical truth** (of a single formula)

– MacFarlane, *Philosophical Logic: A Contemporary Introduction* (2021, ch. 1), etc.

Syntax: 1. Vocabulary

Logical vocabulary

$\neg, \sim$	one-place sentential connectives
$\wedge, \vee, \supset, \equiv$	two-place sentential connectives
$\forall, \exists$	quantifiers

Non-logical vocabulary

a, b, c, ... t	individual constants (names)
A^1, B^1, C^1, ... Z^1	one-place predicates
A^2, B^2, C^2, ... Z^2	two-place predicates
...	n-place predicates
A, B, C, ... Z	sentence-letters
u, ... x, y, z	variables

Punctuation

(,)	parentheses
,	comma

Syntax: 2. Grammar

Well-formed formula

Any sentence-letter by itself is a **well-formed formula**

F^1a, G^1b, ... Any one-place predicate followed by an individual constant is a well-formed formula

$F^2(a,b)$, $G^2(c,e)$, ... Any two-place predicate followed by a left parenthesis followed by an individual constant followed by a comma followed by an individual constant followed by a right parenthesis is a well-formed formula; so on.

- Rules for well-formed formula involving variables and quantifiers.
- Any well-formed formula preceded by the negation-sign is well-formed.
- Inserting a two-place sentential connective between two well-formed formulas, and putting parenthesis around the whole combination of signs is a well-formed formula.

Syntax: 3. Proof

Axioms: Rules of inference

e.g. Modus Ponens [i.e. 'mode that affirms']:

$$\frac{\alpha \supset \beta \qquad \alpha}{\beta}$$

Proof is a syntactical notion; it concerns the manipulations of signs; it does not involve the notion of truth (which is semantic).

If a formula β is **provable** from other formulas α_1, α_2, α_3, we say that it is **derivable** from those formulas.

We can write this as:

$$\alpha_1, \alpha_2, \alpha_3 \vdash \beta$$

The symbole $\vdash$ is called 'single turnstile', explained in the next slide.

Soundness and Completeness of a Logical System

The two concepts concern relations between what is **provable** in a given logical system and what is **logically true** in that system.

So remember:

Syntax

- Provability is a syntactic notion.

$\vdash \varphi$ φ is **provable** (φ is derivable within a system, given the derivation rules in that system).

Semantics

- Logical truth is a semantic notion.

$\models \psi$ ψ is a **logical truth** (no model in which ψ is false; ψ is true in all models).

Soundness and Completeness of a Logical System

A logical system is **sound** **iff** [i.e. 'if and only iff'] every formula that is provable in that system is a logical truth:

$$\textit{If } \vdash \varphi, \textit{ then } \models \varphi$$

A logical system is **complete** **iff** every logical truth in that system is provable:

$$\textit{If } \models \varphi, \textit{ then } \vdash \varphi$$

Which is worse—if a system is unsound or if it is incomplete?

A logical system is **decidable** (about validity) **iff** there is a mechanical method by which one can determine in a finite number of steps if a given formula in that system is a logical truth.

Truth-tables and *truth-trees* are methods for determining logical truth in **propositional logic** and in **(first-order) predicate logic**.

Some Basic Results

0. **Propositional (also called 'zeroth-order') logic** is sound, complete, and decidable.
1. **First-order predicate logic** is sound, complete, but **undecidable** (infinite trees, unlike 'finite tree automata', FTA). It *quantifies* over variables/natural numbers: $\forall x, \exists x$, e.g. $\exists x(\Psi x)$
2. **Higher-order logic** (capable of expressing set theory) is essentially **incomplete**. In particular, Kurt Gödel proved that no such system can be both complete and sound. If it is sound, it will be incomplete. If it is complete, it will be unsound.

0. the basis for this course in the tradition of **analytic philosophy**

[Essay questions] 'critically evaluate' a philosopher's argument or inference in two senses:

1. (verbal) validity
2. soundness (i.e. logical truth: valid and all true premisses)

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Three (Major) Modes of Inference or Reasoning

Logic in the Sciences

1. **Deduction**—*a priori* inference by reason: **deductively** valid/invalid (valid **argument** forms: *MP, MT, disjunctive syllogism/modus tollendo ponens, reductio ad absurdum, etc.*).

   $$\textit{Any } X \textit{ is } Y,\ Z \textit{ is } X \vdash Z \textit{ is } Y$$

2. **Induction**—*a posteriori* inference by (sense) experience: **Hume's problem of induction** (impossiblity of generalisation).

   $$X'\ X''\ X'''\ \textit{etc. are } Z\textit{'s},\ X'\ X''\ X'''\ \textit{etc. are } Y \vdash \textbf{\textit{any}}\ Z \textit{ is probably } Y$$

3. **Abduction**—e.g. *Inference to the Best Explanation* ('abduction' or 'hypothesis' coined by Peirce, e.g. 1867, 281–86), possible to *abduce* despite a *deductive* fallacy of Affirming the Consequent.

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For instance

X's are 'a random sample of big birds'; Y 'white' (predicate); Z 'a swan'.

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Any X *is* $Y'\ Y''\ Y'''$ *etc.*, Z *is* $Y'\ Y''\ Y'''$ *etc.* $\vdash$ Z *is probably* X

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3. **Abduction**—e.g. *Inference to the Best Explanation* ('abduction' or 'hypothesis' coined by Peirce, e.g. 1867, 281–86), possible to *abduce* despite a *deductive* fallacy of Affirming the Consequent.

$$\textbf{Any } X \textit{ is } Y' \ Y'' \ Y''' \textit{ etc.},\ Z \textit{ is } Y' \ Y'' \ Y''' \textit{ etc.} \vdash Z \textit{ is probably } X$$

For instance

X is 'a big bird in Xi'an Tang Paradise'; Y 'black' etc.; Z 'this swan'.

Three (Major) Modes of Inference or Reasoning

Logic in the Sciences

1. **Deduction**—*a priori* inference by reason: **deductively** valid/invalid (valid **argument** forms: *MP*, *MT*, *disjunctive syllogism*/*modus tollendo ponens*, *reductio ad absurdum*, *etc.*).

$$\textit{Any } X \textit{ is } Y,\ Z \textit{ is } X \vdash Z \textit{ is } Y$$

2. **Induction**—*a posteriori* inference by (sense) experience: **Hume's problem of induction** (impossiblity of generalisation).

$X'\ X''\ X'''$ *etc. are* $Z's$, $X'\ X''\ X'''$ *etc. are* $Y \vdash$ ***any*** Z *is probably* Y

Formulating an Argument in Premiss-Conclusion Form

1 Overview and Assessments

2 Essay Questions

3 Analytic Philosophy, not Continental

4 Introduction to a Logical System

5 Three Modes of Inference—Deduction, Induction, & Abduction

6 Formulating an Argument in Premiss-Conclusion Form

7 Assignments for the Next Lecture

Step-by-step approach to formulating an argument

In the analytical tradition

By 'argument' we mean an argument in premiss-conclusion form. This is **evaluated critically** (with an objection and your response).

To this end:

1. Gather a **conclusion** and a set of its premisses for a philosopher's argument [Identification];
2. Make the argument's deduction **valid** (i.e. logically connected) [Validation];
3. Judge whether the argument is **sound** (i.e. all the premisses and conclusion are true) or **unsound** (some premiss is false and so is the conclusion) [Semantic evaluation].
   - The instructor's 'Argument Advice' and references therein

Some Instances

Case 1: **Universal Instantiation**
Arguments that apply a universal principle to a particular case are valid (but only if the principle is absolutely universal). For instance, this is a valid argument:

1. Socrates is a human. [particular case] $(\exists s)Hs$
2. All humans are mortal. [universal principle with Strawsonian 'existential import'] $(\forall x)(Hx \supset Mx) \wedge (\exists x)Hx$

C Therefore, Socrates is mortal. $(\exists s)Ms$

Case 2: **Modus Tollens** [i.e. 'mode that negates']
Arguments of the form 'If P then Q; ¬Q; therefore ¬P' are valid. For instance, this is a valid argument:

1. If Socrates is immortal, then Socrates is not a human.
2. Socrates is a human.

C Therefore, Socrates *cannot* be immortal.

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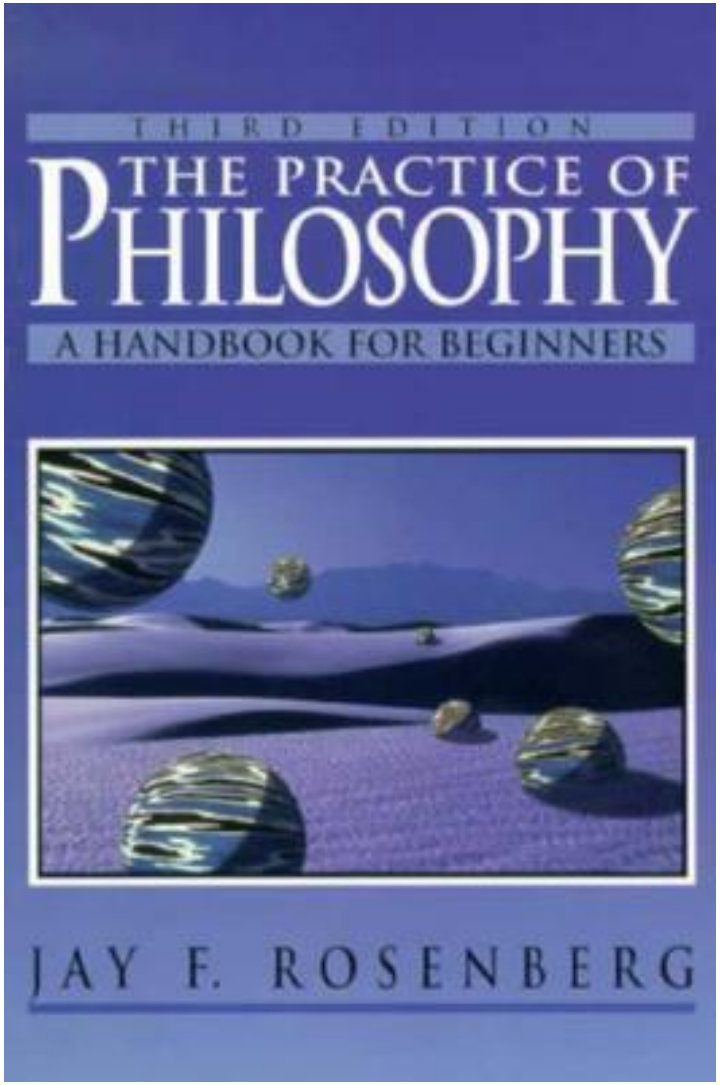
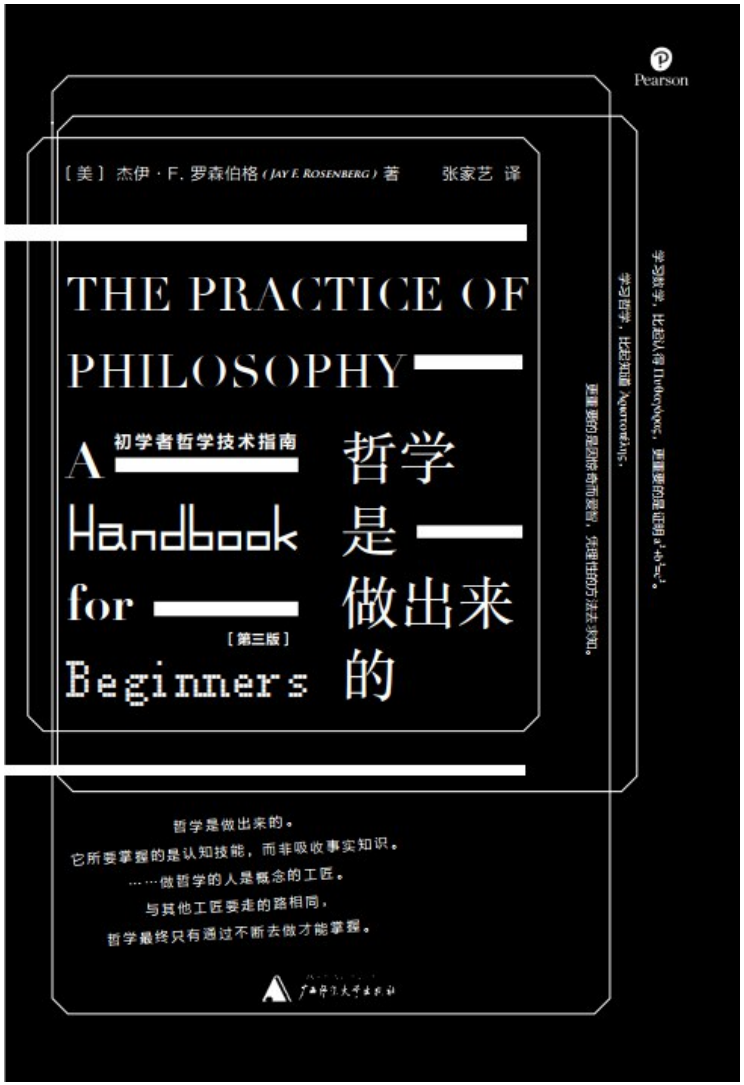
A Great Companion: Jay Rosenberg's *Practice of Philosophy* (3rd ed. 1996; Chinese tr. 2018)

odat@tcd.ie

Overview
Essay Questions
Analysis?
Logic?
Inference?
Argument?
Assignments





Assignments for the Next Lecture

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Next Week 2: Descartes 1

- Get aware of the office hours of the instructor (myself) and TAs. Mine are Mondays 2-4pm (Centre for Social Sciences, C111) or appointment by email: **odat@mail.sustech.edu.cn**
- **Blackboard** (SS149, Spring 2024) contains all the basic info and `recommended references`.
- Join the **WeCom/企业微信** group for this course's updates.

Assignment 1: Read the 'Argument Advice' and 'Assignment Questions' in PDF. And ask me or the TAs for any unclear content in the documents and slides.

Assignment 2: Read Descartes's *Meditations*, Dedicatory Letter, etc., **Meditations 1–3** (*Philosophical Writings*/CSM II 3–36). [Week 2 folder in Blackboard]