# Philosophy 125 — Day 17: Overview

- First Papers and SQ's should be returned by 10/30/03
- A handout + more links on the "slingshot" argument posted
- Agenda: Facts, States of Affairs, and Events
  - The slingshot – Diagnosis and Lessons Learned
  - One Clear Way Out: Russell's Theory of Facts *&* Descriptions
  - Facts as "Truth-Makers"?
  - Facts as "Actualized" States of Affairs?
  - States of Affairs
  - Chisholm's 1970's Views on States of Affairs and Events
  - Events: Two Recent Theories (Davidson and Kim)
- Next Unit: The Possible and The Actual

# The Slingshot Argument — Diagnosis and Lessons Learned 1

- I've posted a handout, which goes over (in detail) two renditions of the slingshot argument due to Davidson and Gödel. Last time, I sketched Davidson's argument. Today, I'll discuss the key common assumptions/steps.
- Davidson assumes that it is OK to substitute *any* logically equivalent statements into *any* definite descriptions of the form "the fact that . . .". Gödel does not assume this. But, both arguments assume two key things:
  1. Definite descriptions $\ulcorner$the $x$ such that $\phi\urcorner$ [$\ulcorner(\hat{x})\phi\urcorner$] *refer* (to the unique thing that satisfies $\phi$, where $\phi$ can be a complex expression). *E.g.*, this implies that "$(\hat{x})(x$ = Socrates and snow is white)" refers to Socrates.
  2. The referent of a complex expression depends only on the referents of its subexpressions, and not on the manner in which these things are referred to. *E.g.*, this implies "the fact that $a = (\hat{x})(x = a$ and snow is white)" has the same referent as "the fact that $a = (\hat{x})(x = a$ and grass is green)", since "$(\hat{x})(x = a$ and snow is white)" and "$(\hat{x})(x = a$ and grass is green)" have the same referent ($a$). So, each of these reduces to "the fact that $a = a$".

# The Slingshot Argument — Diagnosis and Lessons Learned 2

- (1) is *not* assumed in Russell's theory of definite descriptions. One of the main virtues of Russell's theory is precisely that it provides a way for an expression to be *meaningful without referring*. Example: "$(\hat{x})$($x$ is now the King of France)". This expression is meaningful (in context) but does not refer.
- Note: (2) only makes sense if we assume (1). If we have a non-referential (say, Russellian) theory of descrptions, then "the referent of $\ulcorner(\hat{x})\phi\urcorner$" does not exist!
- So, adopting a Russellian theory of definite descriptions is one way to avoid the slingshot. But, *even if* one assumes a *referential* (hence, *non*-Russellian) theory of $\ulcorner(\hat{x})\phi\urcorner$, certain steps in the slingshot argument are less than clear.
- Both versions of the argument contain the following sort of premise: "the fact that grass is green" has the same referent as "the fact that $a = (\hat{x})(x = a$ and grass is green)". But, if we assume a referential theory of descriptions, then the fact that $a = (\hat{x})(x = a$ and grass is green) *is* the fact that $a = a$. But, it is not very clear why this should be the same fact as the fact that grass is green.

# The Slingshot Argument — Diagnosis and Lessons Learned 3

- A few things seem pretty clear, in the aftermath of the slingshot:
  - What really makes the argument tick is the assumption that definite descriptions *refer*. But, a Russellian theory of descriptions (discussed in detail below) does not have this consequence. That's one way out.
  - *Even if* a *referential* theory of definite descriptions is assumed, the argument *also* needs: whatever makes $\ulcorner\phi(a)\urcorner$ true also makes $\ulcorner a = (\hat{x})(x = a \text{ and } \phi(x))\urcorner$ true. But, on a *referential* theory of $\ulcorner(\hat{x})\phi\urcorner$, this is tantamount to: whatever makes $\ulcorner\phi(a)\urcorner$ true makes "$a = a$" true. There seems to be no reason a referential description theorist must accept *that*.
  - What a fact theorist seems to need is *either*: (*i*) a *non*-referential theory of definite descriptions (a la Russell), *or* (*ii*) a theory of facts and fact correspondence which *independently motivates* the claim that (if true) $\ulcorner\phi(a)\urcorner$ and $\ulcorner a = (\hat{x})(x = a \text{ and } \phi(x))\urcorner$ needn't correspond to the same fact.
  - It seems to me that (*i*) is the way to go here, and that going Russell's way on (*i*) *simultaneously* gives a principled way to achieve (*ii*). Here's how . . .

# Russellian Facts and Descriptions 1

- It is useful to think about how Russell's theory of descriptions would paraphrase a sentence like "$(\hat{x})(x = a$ and grass is green$) = a$". This would become: "there exists a unique $x$ such that $x = a$ and grass is green, and this $x$ is identical to $a$". But, that's just: "there exists a unique $x$ such that $x = a$ and grass is green". This statement may be true, but it's not slingshot-able!
- Russell's theory of *facts* is informed by his theory of descriptions and proper names. For Russell, facts are *ordered tuples* of particulars and universals. True sentences having *proper names* in the subject place are treated by Russell as corresponding to *particular* (as opposed to *general*) facts. For instance, "Cicero admired Plato" corresponds to the fact $\langle cicero, \langle admired, plato\rangle\rangle$.[a]
- If we substitute coreferential *proper names* into Russellian facts, this yields *the same fact*. For instance, "Tully admired Plato" *also* corresponds to the fact $\langle cicero, \langle admired, plato\rangle\rangle$, since Cicero = Tully (names *are* referential!).

[a] "Plato was admired by Cicero" would correspond to *the same fact* – tracking *relations* not *syntax*.

# Russellian Facts and Descriptions 2

- However, things are quite different in the case of *definite descriptions*. Since Russell thinks of $(\hat{x})$ as a *quantifier* [like "all" or "some"], true statements with definite descriptions will correspond to *general* facts *not particular* facts.
- On Russell's theory, the true *general sentence* "Every human is mortal" corresponds to the *general fact* $\langle\langle every, human\rangle, mortal\rangle$, which has *more structure* than the *particular* fact $\langle socrates, mortal\rangle$, to which the true *particular sentence* "Socrates is mortal" corresponds. More examples:
- Now, consider two (intuitively) "coreferential" definite descriptions: "the most populous state of the union" $[(\hat{x})Px]$ and "the state with the largest economy in the union" $[(\hat{x})Ex]$. Then, form similar sentences using each of them:
  - "The most populous state of the union recalled Gray Davis" will correspond to the general fact: $\langle\langle the, P\rangle, \langle recalled, gray\ davis\rangle\rangle$.
  - "The state with the largest economy in the union recalled Gray Davis" will correspond to the general fact: $\langle\langle the, E\rangle, \langle recalled, gray\ davis\rangle\rangle$.

- Russell: $\langle\langle \textit{the}, E\rangle, \langle \textit{recalled}, \textit{gray davis}\rangle\rangle \neq \langle\langle \textit{the}, P\rangle, \langle \textit{recalled}, \textit{gray davis}\rangle\rangle$ (facts $f_1$ and $f_2$ must have the same constituents to be identical on Russell's theory), *despite* the fact that $(\hat{x})Ex$ and $(\hat{x})Px$ are (intuitively) "coreferential".
- Returning to the examples appearing in the slingshot argument, we have:
  - "Grass is green" corresponds to $\langle \textit{grass}, \textit{green}\rangle$.
  - "Snow is white" corresponds to $\langle \textit{snow}, \textit{white}\rangle$.
  - "$a = (\hat{x})(x = a$ and grass is green)" corresponds to $\langle a, \langle \textit{equals}, \langle \textit{the}, \phi\rangle\rangle\rangle$, where $\phi(x)$ stands for the following property of $x$: $x = a$ and grass is green.
  - "$a = (\hat{x})(x = a$ and snow is white)" corresponds to $\langle a, \langle \textit{equals}, \langle \textit{the}, \psi\rangle\rangle\rangle$, where $\psi(x)$ stands for the following property of $x$: $x = a$ and snow is white.
- Each of these is *a different fact*, since they all have *different constituents*. Facts are also distinct if their relational structures have *different orderings*.
- This gives a very *fine-grained* account of facts. Is it *too* fine-grained? Do facts simply *mirror* true *sentences* on this account? *E.g.*, is the fact $\langle a, \langle \textit{equals}, b\rangle\rangle$ the same as the fact $\langle b, \langle \textit{equals}, a\rangle\rangle$? It would seem not. But, wouldn't it be a bit strange if two different facts were making "$a = b$" and "$b = a$" true?

## Facts as "Truth-Makers"?

- It is often said that facts are what make true propositions true (or, that it is in virtue of some fact that a true proposition is true). That is, facts are often said to be *truth-makers*. This (if true) has consequences for fact-theory. [Note: It's unclear if *Russell* endorsed such a view, which (it seems) is good for him!]
- Recall that in Loux's inventory of fact *forms* (*logical* forms), he included general, particular, affirmative, and negative facts. But, he did not mention conjunctive or disjunctive facts (or, for that matter, *conditional* facts).
- There is a good reason to worry about "disjunctive facts" if facts are supposed to be *truth-makers*. Consider a disjunction "*A* or *B*". What could make this statement true? Well, intuitively, *either* the fact that *A or* the fact that *B* could do the job of making "*A* or *B*" true — no need for a "disjunctive fact" here.
- What about conjunctive facts? In this case, it appears that we need *both* the fact that *A and* the fact that *B* to make "*A* and *B*" true. But, if we are to have a *single fact* that makes "*A* and *B*" true, then we seem to *need* a *conjunctive fact*.

## Facts as "Actualized" of States of Affairs?

- States of affairs are things which can obtain or fail to obtain, in various possible worlds. For instance, the state of affairs *Socrates' being courageous* will obtain in some worlds (*e.g.*, the actual world) and fail to obtain in others.
- One might be tempted, then, to *identify the fact that Socrates is courageous* ($f$) with some state of affairs. But, which one? Intuitively, the "actualized" (or actually obtaining) *Socrates' being courageous* SOA. Which SOA is *that*?
- Let $s$ be the SOA *Socrates' being courageous*. And, let $s'$ be the SOA *$s$'s obtaining in the actual world $w*$*. It seems that $s \neq s'$, since $s$ will fail to obtain at some non-actual possible world $w'$, but $s'$ will not. In all worlds $w$, $s'$ obtains in $w$, since — *no matter what world you're in* — $s$ obtains ***in $w*$***.
- I suppose that one could identify facts with "world-bound" states of affairs like $s'$, but it's unclear whether it would then be correct to say that facts *are* states of affairs. SOAs like $s'$ seem to me like SOAs *in name only*.
- Note: *Actualists* (who we'll study in the next unit) think SOAs *only* obtain in the actual world. On that view, it would be safe to identify SOAs and facts.

# States of Affairs

- States of affairs are (roughly) "ways the (actual) world *might have been* (or *could be*)", whereas, (roughly) facts are "ways the (actual) world *is*."
- "Socrates's being cowardly" is a state of affairs. But, it is a state of affairs that *does not actually obtain* (so, there is *no fact that Socrates is cowardly*).
- States of affairs are said either to *obtain* (or not obtain). Some states of affairs obtain (or fail to) *necessarily* (*e.g.*, 2*'s being less than* 4), and some states of affairs obtain (or fail to) *contingently* (*e.g.*, *Socrates' being courageous*).
- States of affairs *exist* (as opposed to *obtain*) eternally and necessarily — even SOAs that necessarily fail to obtain, like 4*'s being less than* 2. On this standard view, states of affairs are similar to the Universals of the Platonist.
- [Prelude: One might (with care!) think of possible worlds as *collections of states of affairs*. On this view, "everything that is the case" *is* the *actual* world, and permutations of this collection constitute *non-actual*, *but possible* worlds.]

# Facts & States of Affairs — Objections

- We've already seen one objection to facts as truth-makers of true propositions. The slingshot aims to saddle the fact-theorist with the unintuitive consequence that there's only one (actually) true proposition. There are good replies to this.
- Another objection to fact-theory is that facts are *too similar to true propositions* to *explain why* true propositions are true. Do we have an understanding of facts *independently* of true propositions? How? They're 1–1.
- A similar objection applies more generally to states of affairs and propositions. Again, there is a 1–1 correspondence between them, so why do we need both? Either could serve as objects of thought or assertion (both can be grasped or apprehended, *etc*.), and truth/falsity seems just like obtaining/non-obtaining.
- Why multiply entities by having both states of affairs and propositions, and/or both facts and true propositions? It's not clear how Ockham's razor should cut here. We need to see more theoretical and explanatory applications of them.

# Chisholm on States of Affairs, Propositions, and Events

- Chisholm (1970's) didn't see a way to distinguish true propositions from facts or propositions from states of affairs. He concluded they're only 1 thing, not 3. He called them *states of affairs*, and said they have two essential features:
  - States of affairs are things that can be apprehended, conceived, or "entertained" — things that can be the objects of mental acts.
  - States of affairs are things that can obtain or fail to do so; or, as Chisholm puts it, they are things that can occur or fail to occur.
- For (the 1970's) Chisholm, states of affairs come in two varieties:
  - **Propositions**. These are states of affairs that *always* occur (or *always* fail to occur) — SOAs which cannot occur at $t$ but fail to occur at $t' \neq t$.
  - **Events**. These are states of affairs that can *recur* or be *repeated* — SOAs which can occur at $t$, then fail at $t' > t$ (and then occur again at $t'' > t'$).
- Chisholm (1990's) changed his views on SOAs (maybe propositions can change their truth-values, and events are *non-repeatable particulars*).

# Kim *vs* Davidson on Events

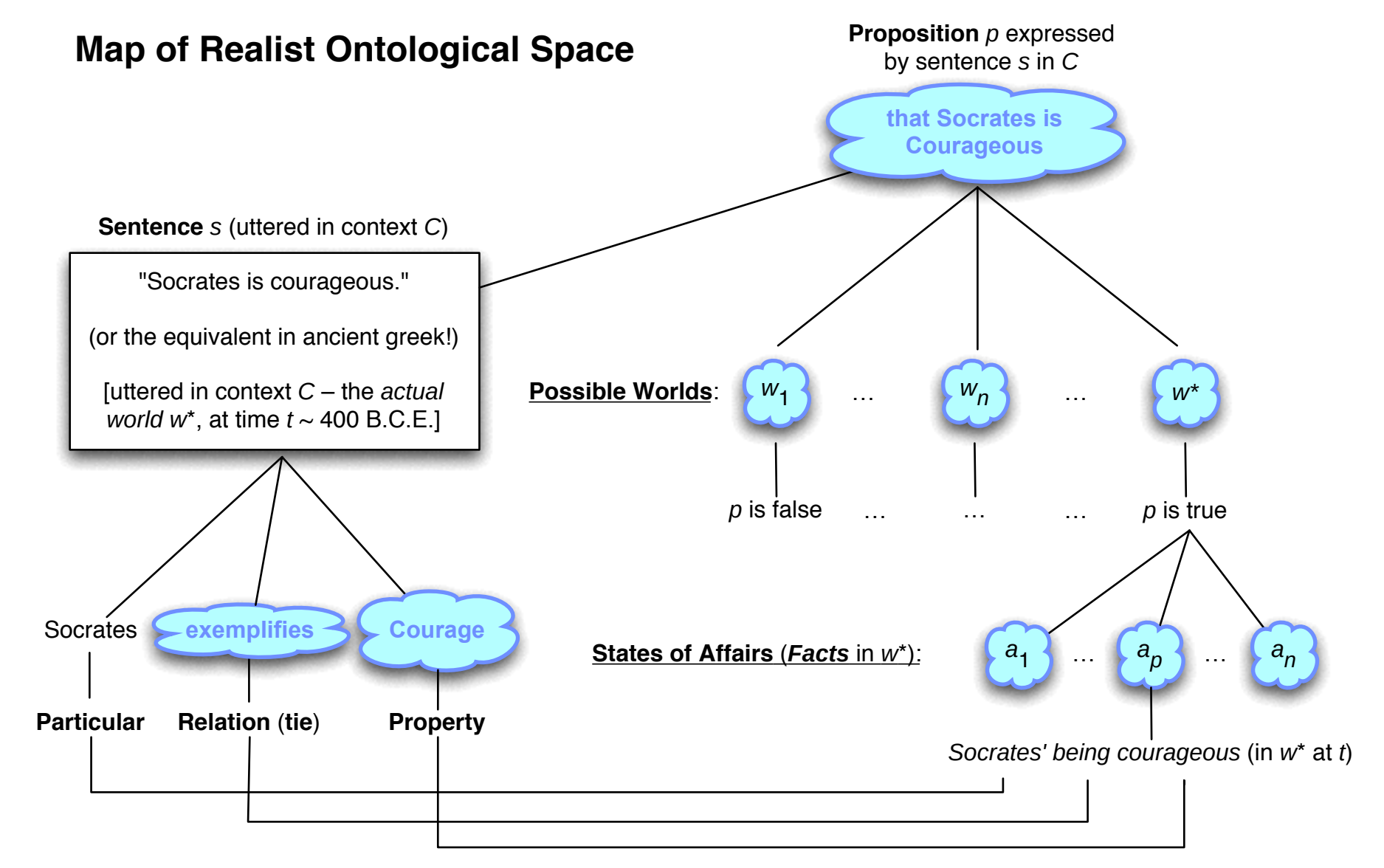
- The contemporary view on events is that they are *non-repeatable and particular* (*not repeatable* and *general*, as in Chisholm's 1970's account). *E.g.*, the earthquake that rocked L.A. at 10 a.m. on July 21, 1883 ≠ the L.A. earthquake of 2 p.m. January 14, 1903 — they are *distinct events*.
- Two prevailing contemporary accounts of events – Kim's and Davidson's:
  - **Kim**. Events are specific property exemplifications by specific particulars at specific times. Event $e$ = event $e'$ just in case $e$ and $e'$ have the same constitutive particulars, properties, and times. Events are *structured* on Kim's view. *E.g., Socrates' being courageous on January 1, 400 B.C.E.*
  - **Davidson**. Events are the relata of causal relations. Event $e$ = event $e'$ just in case $e$ and $e'$ have all the same causes and all the same effects. Events are not structured, and can be described in various distinct ways. *E.g.*, A single event can be described as my flipping the switch at $t$ or my causing the light to go on at $t'$. On Kim's view, these would be 2 *distinct events*.

# More on Davidson's Theory of Events

- Davidson sees events playing two key roles:
  - As the relata of causal relations. Davidson argues that facts are not suitable for this role, since there is only one fact ("slingshot"). Davidson also argues that causal relations are not intrinsic properties of events. This constrains what can count as an event, and how events can be individuated.
  - To provide an account of the behavior of adverbs in sentences like:

  (*) The water boiled quickly in the kitchen this morning.
  - According to Davidson, (*) involves an assertion of existence; it tells us that there is an event, the water's boiling, and describes that event as one that was quick, took place in the kitchen, and occurred this morning.
  - This leads to the Davidsonian view that events are particulars – *unstructured particulars that can be described in various ways*.
  - Since distinct property-exemplifications-at-times can have all the same causes and effects, Kim's account is more *fine-grained* and *intrinsic*.

# Map of Realist Ontological Space



# The Possible & The Actual 1

- Notions of possibility, necessity, and the like are called *modal* notions. We have been using modal notions freely in the course, and we've even been talking (loosely) about "possible worlds" (that is non-actual worlds).
- These notions are far from crystal clear, and there is much disagreement about them in the philosophical literature. There has been a long history of skepticism about the legitimacy of modal concepts (mainly from empiricists).
- Empiricists worry that even if there are necessities in the world, it's mysterious how we could know about them. Naively, it seems like this may require (*per impossible*) some sort of contact with non-actual situations.
- Intuitively, we observe things as they actually are, not as they necessarily are (since we can't peek into other possible worlds to see what's up there).
- One typical move for empiricists is to "go linguistic" and to say that whatever necessity there is in the world is merely verbal, having only to do with how we *choose to use modal language* – no reason to think there are "real necessities".

# The Possible & The Actual 2

- Contemporary challenges to modality are grounded in concerns about the inherent unclarity or vagueness in modal concepts. In particular, there are deep worries about the *opacity and intensionality* of modal discourse.
- We say that a type of discourse is *extensional* (*non*-opaque) if the truth-values of sentences in that type of discourse *do not vary across coextensional substitution*. To illustrate, consider the following non-modal sentences:
  1. Bill Clinton is on vacation in Wyoming.
  2. Every human being is mortal.
  3. 2 + 2 = 4 and Tony Blair is Prime Minister of the United Kingdom.
- Substituting "the 42nd President of the United States" for "Bill Clinton" in (1) does not change its truth-value, because these terms have the same *extension*.
- Similarly, if we substitute term "featherless biped" for "human being" in (2), no change in truth-value results. Again, because the terms are *coextensional*.
- Substituting "snow is white" for "2 + 2 = 4" in (3) does not alter its truth value, because these two statements are *extensionally or materially equivalent*.

# The Possible & The Actual 3

- We have already seen some examples of operators, which can turn extensional sentences into intensional ones. For instance, "the belief that. . . " or "the proposition that. . . " and (on Russell's theory) "the fact that . . . ".
- If we prefix any of our extensional sentences (1)–(3) with any of these intensional operators, then we will render them non-extensional.
- Interestingly, modal operators have this same feature. Consider the operator "necessarily". This is also intensional, as illustrated by the following example:
  - "Necessarily, 2 + 2 = 4 and bachelors are unmarried" is true.
  - "Necessarily, snow is white and bachelors are unmarried" is false.
- Here, substituting the coextensional "snow is white" for "2 + 2 = 4" changes the truth-value of the sentence. This does not happen, in the absence of the "necessarily" operator.
-