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 assumptions and steps. Davidson assumes that it is OK to substitute any logically equivalent statements into definite descriptions of the form “the fact that . . .”. Gödel does not assume this. But, both arguments assume two key things:

1. Definite descriptions refer to the x such that φ refer (to the unique thing that satisfies φ, where φ can be a complex expression). E.g., this implies that “( ˆ 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 = ( ˆ x)(x = a and snow is white)” has the same referent as “the fact that a = ( ˆ x)(x = a and grass is green)”, since “( ˆ x)(x = a and snow is white)” and “( ˆ x)(x = a and grass is green)” have the same referent (a). So, each of these reduces to “the fact that a = a”.

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 ( ˆ x)φ refer also makes ( ˆ x)(x = a and φ(x)) refer. But, on a referential theory of ( ˆ x)φ, this is tantamount to: whatever makes ( ˆ x)φ refer makes “a = a” refer. 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) ( ˆ x)φ and ( ˆ x)(x = a and φ(x)) 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 “(\(\exists x\))(x = a \text{ and grass is green}) = a^\prime\). This would become: “there exists a unique x such that x = a and grass is green, and this x is identical to a\(^\prime\). 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 ⟨⟨Cicero, (admired, Plato)⟩⟩.\(^4\)
- Moreover, if we substitute coreferential *proper names* into Russellian facts, then we get back *the same fact*. For instance, “Tully admired Plato” also corresponds to the fact ⟨⟨Cicero, (admired, Plato)⟩⟩, since Cicero is Tully.

\(^4\)“Plato was admired by Cicero” would correspond to *the same fact* – tracking relations not syntax.

Russellian Facts and Descriptions 2

- However, things are different in the case of *definite descriptions*. Since Russell thinks of (\(\exists x\)) as a *quantifier*, statements involving definite descriptions will correspond to *general* facts [like “Every human is mortal”, which corresponds to ⟨⟨every, human⟩⟩, ⟨⟨mortal⟩⟩, and has more structure than a particular fact].
- Now, consider two (intuitively) coreferential definite descriptions: “the most populous state of the union” [(\(\exists x\))P\(x\)] and “the state with the largest economy in the union” [(\(\exists x\))E\(x\)]. Then, form similar sentences using each of them:
  - “The most populous state of the union recalled Gray Davis” will correspond to the general fact: ⟨⟨the, P\(x\), (recalled, Gray Davis)⟩⟩.
  - “The state with the largest economy in the union recalled Gray Davis” will correspond to the general fact: ⟨⟨the, E\(x\), (recalled, Gray Davis)⟩⟩.
- On this account, ⟨⟨the, E\(x\), (recalled, Gray Davis)⟩⟩ ≠ ⟨⟨the, P\(x\), (recalled, Gray Davis)⟩⟩, despite the fact that (\(\exists \_\_\_\_\_\_\_\_\_\_)E\(x\) and (\(\exists \_\_\_\_\_\_\_\_\_)P\(x\) are (intuitively) coreferential.

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.
- 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 ≠ 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.
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 \( e = e' \) 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 \( e = e' \) 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.

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.