Some new concepts

- Analytic
- Quotation
- Sense versus reference
- Rigid designator
- Essentialism

A note about analyticity

A classic example of an analytic statement is:

All bachelors are unmarried males.

Some philosophers (such as Carnap) thought that modality should be explained in terms of meanings, and in particular necessarily true statements were analytically true statements.

Quine on Intensional Contexts

Non-problematic problem cases:

1. Reference to the name, not to the object

   Twain = Clemens

   'Twain' has five letters.

   'Clemens' has five letters.

2. Reference to features of the name

   Il Duce = Benito Mussolini

   Il Duce was so named because he acted like a ruling aristocrat.

   Benito Mussolini was so named because he acted like a ruling aristocrat.

Basic quotation principle

a is a F

"a" refers to something external.

"a" is a G

"'a'" refers to the name itself.

Thus, the referents are not the same. No problems for substitutivity of identicals or for Leibniz's law.

[Still, there is mystery here. I have to know what "Duce" means to make sense of the example with Mussolini, so the meaning of the word must play a role.]

Quine on Intensional Contexts

Problematic problematic cases (referential opacity):

1. Cognitive attitudes

   Malcolm X= Malcolm Little
   Tom believes Malcolm X is a great orator.
   Tom believes Malcolm Little is a great orator.

2. Modal contexts

   Necessarily 50 = 50.
   The number of states = 50.
   Necessarily The number of states = 50.

   The number of states = 50.
   It is possible that The number of states = 52
   It is possible that 50 = 52.

A possible fix for cognitive attitudes? The proposition attitude approach.

Tom believes Malcolm X is a great orator.

Really means:

Tom believes the proposition that *Malcolm X is a great orator.*

But: doesn't the "Malcolm X" in that proposition mean (something like) the name, in the context of this sentence?

And: have we explained anything by making a proposition opaque (as opposed to saying the name is opaque)?

Quine's Modal examples

(15) 9 is necessarily greater than 7.

(16) Necessarily if there is life on the Evening Star then there is life on the Evening Star.

(17) The number of planets is possibly less than 7.

Because the Evening Star = the Morning Star *and*
The number of planets = 9 (Quine thought) *we get*

(18) The number of planets is necessarily greater than 7.

(19) Necessarily if there is life on the Evening Star then there is life on the Morning Star.

(20) 9 is possibly less than 7.

Reference issues, an aside

For Quine, Frege was correct: "the Evening Star" has:

- a sense
- a reference.

"The Morning Star" and "The Evening Star" have the same referent, but they have different sense.

From this, Quine concludes it was possible that the Morning Star was not the Evening Star.

Kripke argued that the only meaning of the "the Evening Star" that mattered for questions of identity was the reference. This is why he says if

the Evening Star = the Morning Star

then

Necessarily the Evening Star = the Morning Star.

This gives us reason to reject the claim that (19) is wrong. But what about the other problems?

Reference issues, an aside, continued

Note that Quine says of

(34) If there is life on the Evening Star then there is life on x

That “Necessary fulfillment of (34) makes no sense as applied to physical object x; necessity attaches, at best, only to the connection between (34) and one or another particular means of specifying x” (149).

And later: “The real insight, in danger now of being obscured, was rather this: necessity does not properly apply to the fulfillment of conditions of objects (such as the ball of rock which is Venus, or the number of which numbers the planets) apart from special ways of specifying them” (151)

Does it help to banish names using quantifiers?

There exists something x such that Tom believes x is a great orator.

This is less obviously paradoxical, but we still have the problem that this thing is both Malcolm X and Malcolm Little, these are identical, but only one name will work to make a true sentence.

What is a proper name?

Quine argues these are proper names

9

The number of planets

But are they both proper names?

Quine versus Kripke (and Arthur Smullyan)

"An object x must, to survive, meet this condition: if S is a statement containing a referential occurrence of a name of x, and S' is formed from S by substituting any different name of x, then S and S' not only must be alike in truth value as they stand, but must stay alike in true value even when 'necessarily' or 'possibly' is prefixed" (150-151)

This would follow for modal contexts (though not for cognitive opacity) if the names were *rigid designators.*

Essentialism, described by WVOQ

"An object, of itself and by whatever name or none, must be seen as having some of its traits necessarily and others contingently, despite the fact that the latter traits follow just as analytically from some ways of specifying the object as the former traits do from other ways of specifying it" (155).

Consider

$\Box\forall x\ (x = x)$

And

$\neg\Box\forall x$ (Today is Wednesday and x = x)

Intensionality as analyticity?

- Church and others propose *intensional* interpretation of predicates.
- A predicate F is interpreted in an extensional semantics as meaning the set of things that are F.
- Thus, in extensional semantics, if $\forall$**x(Fx $\leftrightarrow$ Gx)** then F and G have the same meaning.
- In intensional semantics, F and G only have the same meaning if some additional criterion is met. (Also, they are not associated with sets but with classes.) For this extra stuff, Church proposed *analyticity.*
- Church proposes the same for names: a=b is necessary only if analytic.
- Quine's examples aim to show this fails: suppose a and b are analytically identical, then a and ix(P ^ x=b) is analytic but the later is not necessary.

Reminder: what is the difference between?

$\Box\forall xFx$

$\forall x\Box Fx$

We need some serious philosophical thinking here….

De dicto, De re

- A **de dicto** modality concerns the sentence (what is said, dicto)
- A **de re** modality concerns actual properties or things (the thing, re)
- Our modal operator is ambiguous, or perhaps rather more general.

De dicto, De re – one possible way to distinguish them

- Remove everything not in the scope of the modal operator. If there is a free variable in that scope, then it is de re. Else, the operator is probably de dicto (with some possible exceptions we'll discuss).
- $\Box\forall xFx$ would be de dicto
- $\forall x\Box Fx$ would be de re (because $\Box Fx$ has a free variable)

[Though this way of thinking has been proposed and defended by some logicians, it seems sufficient but not necessary to me. Isn't "Socrates is necessarily human" also a de re use of "necessarily"?]

Does this require different interpretations of quantifiers? One proposal:

- In de dicto cases (where the modal operator is outside the quantifier's scope), quantifiers are interpreted normally
- In de re cases (where the modal operator is inside the quantifier's scope), quantifiers range over actually existing things (though these things can also have counterparts in other possible worlds)
- One way to handle this: have two different kinds of quantifiers, an "actualist quantifier" and a "wide-" or "possibilist quantifier."

BUT!

- What does $\forall x \Box Fx$ mean?
- Many philosophers and logicians claim it cannot mean that *for each x it is a necessary truth that x has property F*, since "x has property F" is not a sentence
- To the discomfort of some philosophers and logicians (and the joy of others), some interpret this to mean *for each x, x has property F essentially*

Transworld identity problems. Chisholm creates a swapping-ships-of-Theseus problem.

Now let us move from W^2 to still another possible world W^3. Once again, we will start by introducing alterations in Adam and Noah and then accommodate the rest of the world to what we have done. In W^3 Adam lives for 932 years and Noah for 948. Then moving from one possible world to another, but keeping our fingers, so to speak, on the same two entities, we arrive at a world in which Noah lives for 930 years and Adam for 950. In that world, therefore, Noah has the age that Adam has in this one, and Adam has the age that Noah has in this one; the Adam and Noah that we started with might thus be said to have exchanged their ages. Now let us continue on to still other possible worlds and allow them to exchange still other properties. We will imagine a possible world in which they have exchanged the first letters of their names, then one in which they have exchanged the second, then one in which they have exchanged the fourth, with the result that Adam in this new possible world will be called "Noah" and Noah "Adam." Proceding in this way, we arrive finally at a possible world W^n which would seem to be exactly like our present world W^1, except for the fact that the Adam of W^n may be traced back to the Noah of W^1 and the Noah of W^n may be traced back to the Adam of W^1.

This uses something like a metaphysical instance theory sometimes called the "bare particular theory."

Chisholm's solution: essentialism

For every entity x, there are certain properties N and certain properties E such that: x has N in some possible worlds and x has non-N in others; but x has E in every possible world in which x exists; and, moreover, for every y, if y has E in any possible world, then y is identical with x. (If "being identical with x" refers to a property of x, then we should add that E includes certain properties other than that of being identical with x.) The properties E will thus be *essential* to x and the properties N *non-essential*, or accidental.[5]

But: essentialism and existence

- How shall we interpret "Socrates is necessarily human"? $\Box$**Hs**
- De dicto: in every possible world, Socrates in human.
- De re: essentially, Socrates is human.
- It seems, though, that $\Diamond\neg\exists$**x x=s** (that is, it seems that in some worlds Socrates doesn't exist).
- So, on the de dicto reading
  - $\Box$**Hs** is false, or
  - We claim Socrates is human is true even in worlds without a Socrates


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A revised definition of essentialism?

- Allow that some objects can exist in some worlds and not in others.
- Allow that a necessary property need not be true of all objects in a world.
- Put these together: Thing **t** essentially has property **P** if and only if there is no world where **t** exists and **t** also lacks property **P**

Kaplan's alternative to identity

- For each individual, we identify properties we consider essential.
- Then in other worlds there are *counterparts* that have those same properties.
- The counterparts are not identical to the actual instance. That's the reason for the term "counterparts." (Kaplan claims this is a great virtue, since it spares Leibniz's Law.)
- Presumably then only a portion of Chisholm's many "Adams" would not be counterparts of Adam.

The Barcan Formula

$$(\forall x \Box \varphi x \rightarrow \Box \forall x \varphi x)$$