# Philosophy 308
# *The Language Revolution*
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## Class #18: Quine and Meaning Holism
Underdetermination, Indeterminacy, Inscrutability

# Business

- Next week, we start with Kripkenstein and the Private Language Argument
  - Brett on Tuesday
  - Pippa on Thursday
  - Two GTAs: one Wittgenstein and one Kripke
- Today, we finish with Quine's meaning holism
  - Strong Quine: There are no meanings and translation is indeterminate.
    - Meanings skepticism
  - Moderate Quine: We have meaningfulness, in behavior, and mappings from one language to the next which fit all behavioral constraints.

# Two Dogmas and Translation

## Connecting Quine's two papers

- Translation between languages relies on synonymy between terms or sentences of the different languages.

- Thus, if there is no analytic/synthetic distinction because there is no synonymy ("Two Dogmas"), talk of correct or incorrect translation is meaningless ("Ontological Relativity").

- Meaning is the property of whole languages as expressed in behavior.
  - ‣ Stimulus meaning

# Meaning Holism and the Analytic/Synthetic Distinction

QM1. If there is an analytic/synthetic distinction, there must be a good explanation of synonymy.

QM2. The only way to explain synonymy is to posit determinate meanings.

QM3. But there are no determinate meanings; the museum of meanings is a myth.

QM4. Thus, there is no good explanation of synonymy.

QMC. And thus there is no analytic/synthetic distinction.

▸ Both the arguments against the myth of the museum and the arguments for indeterminacy of translation support QM3.

# An Epistemic Argument
# For Meanings Skepticism

- Quine's primary argument against the myth of the museum is epistemic.
- If there were meanings, there would be no way to know them, whether we take them to be ideas or abstract objects.
- There is no way for us to apprehend meanings, "[Beyond] what may be implicit in [our] dispositions to overt behavior" (OR, 27).
- When we translate from one language to another, we do not merely switch labels on internal exhibits.
- We look for translation manuals which fit all and only the overt behavior of the native.

# Radical Translation and Behavioral Constraints

- Radical translation is the translation of completely unrelated languages.
- The field linguist attempts to translate a completely alien language into her home language.
  - No hints
  - No bilinguals
- But radical translation is just a limit case of everyday communication.
- The evidence for a translation is supposed to be all the evidence we ever have for understanding people.
- Language, Quine claims, is "[A] social art which we all acquire on the evidence solely of other people's overt behavior under publicly recognizable circumstances" (26).

# Language Learning

- We start to learn language mostly by ostension, the paradigm case of which is simple pointing.

- By ostension, we learn to put labels on objects.

- As our knowledge of language grows, we discover some words that do not ascribe observable traits to observable things.

- Learning abstract terms, logical terms, prepositions, plurals, and individuative terms requires a more subtle learning process, which Quine calls deferred ostension.

- Still, the tools we have to learn language are exhausted by behavioral evidence.

# A Moderate Behaviorism

- Quine's behaviorism is not metaphysical.
  - ‣ He is not primarily denying that there are mental objects or events.
- His behaviorism is epistemic.
  - ‣ Behavioral evidence is all the evidence we have.
- If we learn something that can not be traced directly to overt behavior, then we must have learned it indirectly, in some complex way, from behavior.
- If there is a fact of the matter about which of two translations of a native sentence is right, or which words are synonyms, then there would have to be behavioral evidence to decide the matter.
- In the absence of any observable evidence which could decide on a correct translation, we should conclude that translation is indeterminate.

# Inside and Outside

Different persons growing up in the same language are like different bushes trimmed and trained to take the shape of identical elephants. The anatomical details of twigs and branches will fulfill the elephantine form differently from bush to bush, but the overall outward results are alike (*Word and Object*, 8).

# Underdetermination, Indeterminacy, Inscrutability

- There are three levels of indeterminacy, broadly construed.

  I1. Underdetermination of scientific theory
    - At the level of theory

  I2. Indeterminacy of translation
    - At the level of sentences

  I3. Inscrutability of reference
    - At the level of terms

- If inscrutability holds, the others follow.

# An Example of Underdetermination

- Consider two scientific theories.
- From the first, we derive the claim:
  - ‣ ST1: Dark energy makes up 73% of the universe.
- From the second, we derive the claim:
  - ‣ ST2: Dark energy makes up 74% of the universe.
- At the moment, let us assume, we lack the evidence to decide between the theories which yield ST1 and ST2.
- We can call those theories *empirically equivalent*, for now.
- But, this underdetermination is merely an epistemic problem.
- We do not conclude that there is no fact of the matter about which theory to choose.
- We just do more research.
- At some point, we expect, those theories will no longer be empirically equivalent.
- Underdetermination entails no metaphysical conclusions.

# Underdetermination of Scientific Theory

- There may be a lack of information to settle a scientific question.

- Our own beliefs are underdetermined by empirical evidence.

- We do not know Socrates' blood type.
  - Any theory of the blood types of all human beings who ever lived will thus be under-determined by the evidence.

- We do not know whether and how much of the universe is made of dark energy.

- Our current scientific theories are underdetermined by the evidence.

# Indeterminacy of Translation

- Indeterminacy of translation is deeper, and perhaps more troubling.

- It occurs on the sentence-level.
  - ‣ Holophrastic indeterminacy

- Quine's topiary metaphor:
  - ‣ Entire theories could look the same on the outside, but be constructed quite differently on a piece-by-piece (i.e. sentence-by-sentence) level.

- The indeterminacy thesis: it is possible to have incompatible translation manuals each of which is consistent with all behavioral evidence.
  - ‣ *Word and Object*
  - ‣ Hard to defend
  - ‣ "Here the claim is that there is more than one correct method of translating sentences where the two translations differ not merely in the meanings attributed to the sub-sentential parts of speech but also in the net import of the whole sentence. This claim involves the whole language, so there are going to be no examples, perhaps except of an exceedingly artificial kind" (Hylton, SEP on Quine).

# An Example of Indeterminacy

## From Hartry Field, in his article "Quine and the Correspondence Theory"

- Translating Newtonian theory into relativity theory, we can translate mass as either relativized mass, in which case momentum is mass times velocity, and mass is not invariant.

- Or, we can translate it as rest mass, in which case mass is invariant, but the momentum equation doesn't work.

- We will not pursue indeterminacy at the sentential level, here.
  - ‣ Empirical question: Is Quine right?

# Inscrutability

- If reference is inscrutable, then at least some sort of indeterminacy follows.

- Quine presents five examples of inscrutability of reference.
    IR1: The French ne...rien construction
    IR2: Gavagai
    IR3: Japanese classifiers
    IR4: Concrete general and abstract singular terms
    IR5: Gödel numbering and deferred ostension

# Ne...rien

- In IR1, you do not know whether to translate the French 'rien' into the English 'nothing' or 'anything'.

- It depends on how you translate the rest of the construction.

- If you take 'rien' as 'anything', then you have to take 'ne' as 'not'.

- But, if you take 'rien' as 'nothing', then you have to take 'ne' as empty, or pleonastic, as an essential part of the 'ne...rien' construction.

- The museumist can object that Quine is dicing up the pieces of a sentence too small, that larger segments (i.e. the whole 'ne...rien' construction) carry meaning.

- But the lesson of IR1 is useful: by adjusting some portions of the translation, we affect others.

# Gavagai Exercise



- We have various options for translating 'gavagai' into English.

  G1: rabbit
  G2: undetached proper part of a rabbit (urp)
  G3: three-dimensional temporal slice of a four-dimensional rabbit
  G4: instantiation of the universal rabbithood

- In groups
  - What are the benefits of each option?
  - Which one would you choose?
  - Why?

# Shifting the Logical Particles

- By playing with the logical particles (e.g. identity), we can map different ways of cutting up the world onto each other.

- If we choose G2 for 'gavagai', we change the native's 'is the same as' to 'is the same collection of undetached proper parts of' (or something like that).
  - The only difference among rabbits and urps and temporal segments of four-dimensional rabbits is the individuation.

- Individuation cannot be mastered through pure ostension.
  - "The only difference is in how you slice it. And how to slice it is what ostension or simple conditioning, however persistently repeated, cannot teach" (OR, 32).

- The phenomenon of adjusting logical particles in order to make distinct interpretations of other terms equivalent is common to all of Quine's examples of inscrutability.
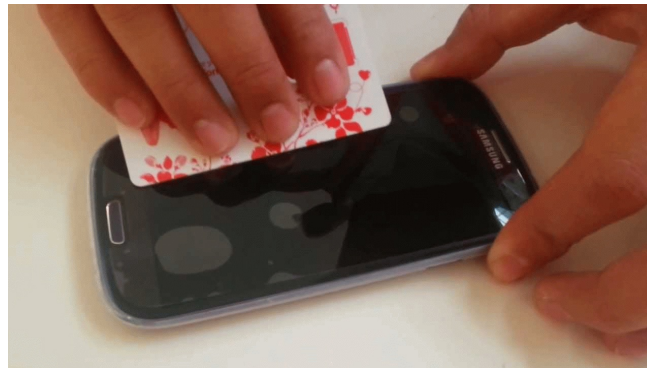
# Simplicity...

- We might argue that 'rabbit' is simply simpler than 'undetached rabbit part'.
  - ▸ "An actual field linguist would of course be sensible enough to equate "gavagai" with "rabbit," dismissing such perverse alternatives as "undetached rabbit part" and "rabbit stage" out of hand. This sensible choice and others like it would help in turn to determine his subsequent hypotheses as to what native locutions should answer to the English apparatus of individuation, and thus everything would come out all right. The implicit maxim guiding his choice of "rabbit," and similar choices for other native words, is that an enduring and relatively homogeneous object, moving as a whole against a contrasting background, is a likely reference for a short expression. If he were to become conscious of this maxim, he might celebrate it as one of the linguistic universals, or traits of all languages, and he would have no trouble pointing out its psychological plausibility. But he would be wrong; the maxim is his own imposition, toward settling what is objectively indeterminate" (OR, 34).

# ...and Chauvinism

- We discriminate terms by projecting our own attitudes towards grammar, and logical form.

- The maxims for determining reference assume the linguist's own referential apparatus.

- When we try to create a translation manual for a radically different language, we will meet the problem of whether to translate into rabbit ontology or urp ontology.

- It is linguistically chauvinistic to imagine that simplicity in our language is simplicity over all.

# The Pelicans



- Imagine a tribe who call pelicans their half-brothers
- When they talk about what we refer to simply as half-brothers, they have to use a longer term, equivalent to 'half-brother, but not a pelican'.
- But they have a short term for our long 'half brother or pelican'.
- So simplicity, for example, will not do as a guide.

# Japanese Classifiers

For IR3, the example is of a word which comes with a number and an object.

- That word either modifies the number, or the object.

- Depending on how we use it, the object becomes either a mass term (like water or sepia), or an individuative term (like rabbit).

- Either translation is consistent with speech dispositions, just as 'rabbit' and 'urp' are consistent with speech dispositions, as long as we make corresponding changes to the logical and individuative particles of the rest of the language.

# Concrete General and Abstract Singular terms

- Terms like 'green' and 'alpha' can be taken either as concrete general terms ('the grass is green') or abstract singular terms ('green is my favorite color').
  - ‣ Plato's forms
- The only way we can tell them apart is to use our English apparatus of individuation.
- To impose our apparatus is chauvinistic.

# But wait, there's more!

# Inscrutability Begins at Home

- It seems as if I know that I mean rabbit, rather than urp, and that I know which translation of 'gavagai' is simpler.

- But, if we try to determine how I can mean one rather than the other, we need to appeal to my ideas.
  - ▸ What are those?
  - ▸ How do we know them?
  - ▸ Can we be wrong about them?
  - ▸ Wittgenstein on the private language argument

- If we have no internal grounds for determining correct translations, then there seems to be no fact of the matter about what I say.

- "On deeper reflection, radical translation begins at home" (OR, 46).

# There Are No Reference Facts

- If we can adjust another person's words, and we can translate into proper-part talk without affecting behavior, then we lose the ability to understand our neighbor's assertions as correctly referential.

- If she says that she is talking about rabbits, we don't know if she is, or not.

- "The inscrutability of reference is not the inscrutability of a fact; there is no fact of the matter" (OR, 47)
  - ‣ Remember the meanings skepticism

- If there is a fact of the matter in our own words, then there is a fact about our neighbor.

- But since we know that there is no fact about our neighbor's terms, then we know there is no fact about our own terms.

# Homophonic Translation

- Consider what Quine calls homophonic translation, when we translate each string of phonemes into itself.

- We use homophonic translation when talking with our friends and family, people who use the same language that we do.

- We use a principle of charity even in homophonic translation.

- And there are some times when we use heterophonic translations, even among friends.

- I know some people who start sentences with 'No', even when they agree with me.

- Sometimes, I call them out on it: "So, when you said 'no', you meant 'yes'."

- Other times, I just do the heterophonic translation quietly, to myself.

# Reference is Nonsense

"[The] network of terms and predicates and auxiliary devises is, in relativity jargon, our frame of reference, or coordinate system. Relative to *it* we can and do talk meaningfully and distinctively of rabbits and parts... We contemplate alternative denotations for our familiar terms. We begin to appreciate that a grand and ingenious permutation of these denotations, along with compensatory adjustments in the interpretations of the auxiliary particles, might still accommodate all existing speech dispositions. This was the inscrutability of reference, applied to ourselves; and it made nonsense of reference. Fair enough, reference *is* nonsense except relative to a coordinate system. In this principle of relativity lies the resolution of our quandary" (OR, 48).

# Inscrutability and the Analytic/Synthetic Distinction

- If there is determinacy, then there is a fact of the matter about what we mean when we say something: the right translation would thus be grounded.

- But if we had that, then we could have analyticity.

- If we have analyticity, then we can get synonymy, and then we have a fact of the matter about what we say, which can make a translation correct.

- In the other direction, if we have a correct translation, it must be right in virtue of some fact.

- That fact would give us synonymy, which could give us back analyticity.

- Determinacy of translation is just another member of the intensional family we have to give up.

# Vertigo, Anyone?

- It is meaningless to ask whether 'rabbit' refers to rabbits or urps or time slices, even in one's own words, absolutely.

- It makes sense only relative to a background theory which we hold fixed.

- We can make wholesale adjustments to the interpretation of that background theory and still do justice to all speech/ behavioral dispositions.

- We were led to the inscrutability of reference from our considerations of the theory of meaning.
  ‣ Meaning was always suspect.
  ‣ But reference seemed more solid.

- Some of us were wary of meanings, propositions, and senses, anyway.

- Russell had already tried to avoid them.

- Now it looks like both meaning and reference are indeterminate.
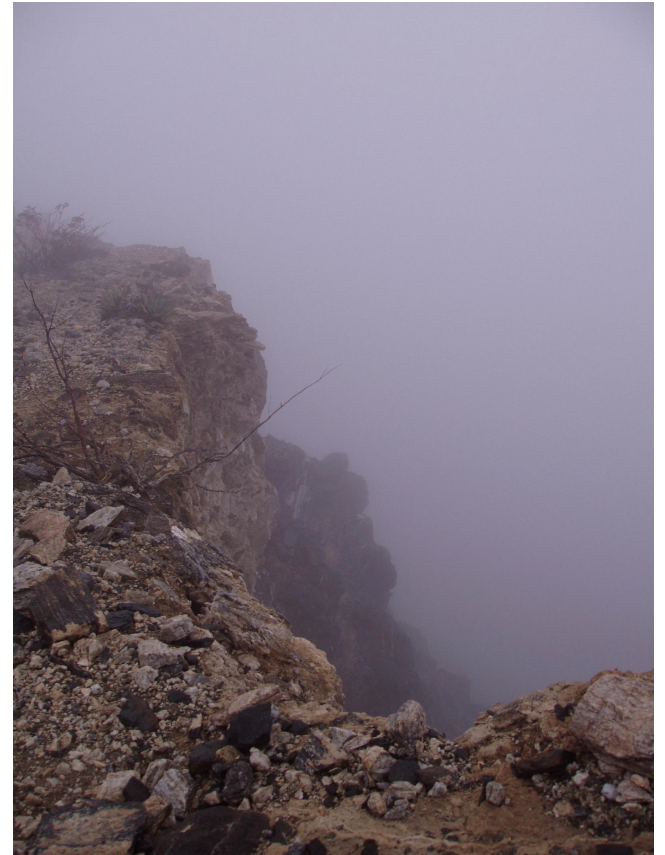
# Pragmatic Constraints on Conversation

- In practice, we end the regress through pointing (or something else practical).

- But in the end, there is no determinacy.

- It only makes sense to talk about how to interpret theories in other theories.
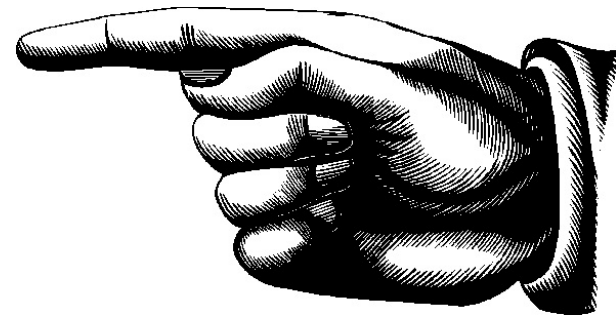
# The Relational Theory of Reference

- We were interested in reference because that was how language hooked onto the world.

- If Quine is correct that reference is indeterminate, then our ontological commitments seem to disappear into a foggy haze.

- The references of our terms depend on an arbitrary choice of the logic of individuation, which can be variously interpreted in a series of background languages.

- We can only interpret a theory, a web of belief, relative to a background theory.

- But that background theory is itself liable to various, empirically equivalent interpretations.

- We seem to become involved in an infinite regress of background languages.

- "What makes sense is to say not what the objects of a theory are, absolutely speaking, but how one theory of objects is interpretable, or re-interpretable in another" (OR, 50).

# Inscrutability and the Inverted Spectrum

- We can never fully interpret a theory, (i.e. say what the singular terms signify or denote, or what go into the extensions of the general terms) because this would say absolutely what the objects of that theory were.

- The problem of the inverted spectrum, which traces back to Locke, is the question of whether our qualitative experiences of color are the same as other people's experiences of color.

- What if every time I saw red, you saw violet; every time I saw yellow, you saw blue?

- If I learned to use language the same way that you use it, and there is no possibility of knowing what another person's qualitative experiences are, it seems possible that my color experience is exactly inverted from yours.

- Quine argues that ontic commitments, and the referential apparatus, of any one person's theory may be similarly indeterminate.
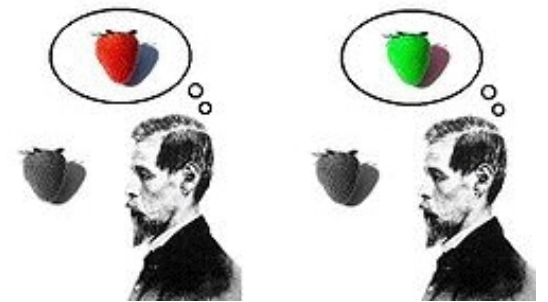
# From Holism to Ontological Relativity

- According to Quine, ontology is the result not of looking around at particular things but of interpreting one's whole theory.

- But meanings of our even our whole theories are indeterminate.
  - ▸ Indeterminacy of translation
    - – Translation is synonymy
    - – There's no good synonymy
  - ▸ Inscrutability of reference

- Thus, our ontology is indeterminate too.
  - ▸ Ontological relativity

# The 'Ontological' in 'Ontological Relativity'

# Empiricism, Logical Empiricism, and Ontology

- Ontology: What Exists

- Atomism and ontology
  - ▸ The meaning of a sentence is its method of verification.
  - ▸ We can find ontology in the referents of the singular terms of our theories.
  - ▸ 'Joan Stewart is in China'

- Holism and ontology
  - ▸ Meaning is a property of whole languages.
  - ▸ We have to look at the ontology of the whole language, not of particular sentences.

# Ontology and Posits

- Along with the loss of reductive justifications of particular sentences, we lose a straightforward method for determining our ontology.

- Instead of direct lines from physical objects to sense data to singular terms, we have to determine our ontology by appeal to the whole of science.
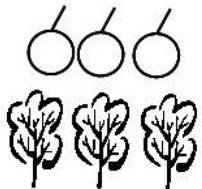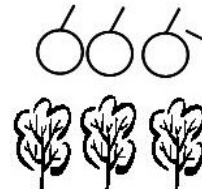
# Posits

- Science is a tool, for predicting future experience in the light of past experience.
- Physical objects are convenient posits, "[C]omparable, epistemologically, to the gods of Homer" (Two Dogmas, 167).
- We already accept an ontology of posits for distant objects and very small objects, like electrons.
- Quine argues that all our ontology is of that form.
- "To call a posit a posit is not to patronize it" (*Word and Object*, 22).
- The method of positing is just a result of the failure of reductionism and the turn towards holism.
- The difference between questions of the existence of sets, say, or quarks, and questions of the existence of houses is only one of degree, not of type.
- Posits are accepted or rejected according to pragmatic considerations of theory construction, as well as their coherence and consistency with our broader theory, the web of belief.

# Quine's Procedure for Determining Ontological Commitments

QP1: Select a best scientific theory, one which balances simplicity, strength, and fit with sense experience.

QP2: Regiment that theory in first-order logic with identity.

QP3: Model the resulting formal theory.

QP4: Examine the domain of quantification of the theory to see what objects the theory needs to come out as true.

# The Indispensability Argument

- One consequence of QP is that he reconciles mathematical ontology with empiricist epistemology.

- Traditionally, empiricists had difficulty explaining how we could have knowledge of the abstract objects of mathematics.

- Like Fregean propositions, they inhabit a third realm, and do not impinge on our sense organs.

- By seeing all ontology as scientific posits, Quine opens the door for objects which facilitate, in serious ways, the construction and regimentation of scientific theory.

- Quine's justification of mathematics is called the indispensability argument, for its claim that mathematics is indispensable to science.

# Summing Up

- Frege took meanings (propositions, concepts) to be objective, third-realm entities.

- The logical empiricists, preferring parsimony, thought of meaning as method of verification.

- Quine argues that meaning is the property of larger swaths of language.
  - ‣ Holism and the web of belief
  - ‣ Meaningfulness without meanings

- Wittgenstein can be interpreted as denying even the doctrine of meaningfulness.
  - ‣ Meanings skepticism ho!