

Class Fifteen: Radical Translation and Its Challenges

Philosophy and Science Fiction - Ryan Simonelli

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1 Quine on Radical Translation and Indeterminacy

- **Quine:** W.V.O. Quine:
 - Very influential mid-20th-century American philosopher.
 - Made major contributions to logic, philosophy of language, metaphysics, and epistemology.
 - Much of his philosophy of language—his *theory of meaning*—was centered on the idea “radical translation.”
- **Radical Translation:** The sort of thing we see in *Arrival*: a linguist goes to a completely foreign population, whose language she does not know at all, and aims to construct a “translation manual” for that language.
 - For Quine, the primary data is the *assent* to sentences, upon certain sorts of prompting.
 - * “Sentence,” in Quine’s sense, can include things like exclamative observations “Rabbit!”
 - * Of course, doing this involves discerning a pair of positive and negative responses to sentences that count as *assent* and *dissent*, *affirmation* and *denial*, or *acceptance* and *rejection*.
- **The Uncertainty of Linguistic Interpretation:** “Optimistic interpretation: the heptapod was confirming my utterances as correct, which implied compatibility between heptapod and human patterns of discourse. Pessimistic interpretation: it had a nagging cough,” (98).
 - *The legend of “Kangaroo”:* “In 1770, Captain Cook’s ship *Endeavour* ran aground on the coast of Queensland, Australia. While some of his men made repairs, Cook led an exploration party and met the aboriginal people. One of the sailors pointed to the animals that hopped around with their young riding in pouches, and asked an aborigine what they were called. The aborigine replied, ‘Kanguru.’ From then on Cook and his sailors referred to the animals by his word. It wasn’t until later that they learned it meant ‘What did you say?’
I tell that story in my introductory course every year. It’s almost certainly untrue, and I explain that afterwards, but it’s a classic anecdote” (99).
- **The Principle of Charity:** Our translation of should minimize the false beliefs we ascribe to the speakers of the language. For instance, if we translate “gavagi” as “rabbit,” and a speaker points to a snake and says “gavagi,” we should more inclined to revise our translation (perhaps changing the translation of “gavagi” to “animal”) rather than attribute the false belief to the speaker that the snake is a rabbit.
 - **Question:** Does this principle hold up when we consider genuinely alien translation? Could the conceptual scheme of an alien be so different than our own that what we regard as absurd or contradictory could actually make perfect sense, according to the alien’s conception of things?
- **Indeterminacy:** One of the striking features of Quine’s account is of radical translation is the idea of *indeterminacy* of translation. The idea is that we have two distinct translations

that translate things *differently*, and yet each are perfectly empirically adequate with respect to all of the speakers' responses

- **Quine's Famous Examples:** Suppose we establish that the speaker assents to "Gavagai" when and only when a rabbit is present. One obvious translation is to translate "gavagai" as "rabbit." But is this the only possible translation? Quine says "No."
 - * Couldn't it just as well mean "undetached rabbit parts"?
 - * Suppose the speakers have a four-dimensionalist ontology and they regard the three-dimensional thing that I've just pointed to not as a *rabbit* but as a *rabbit stage*. Maybe that's so, and "gavagai" means "rabbit stage."
- **A Boring Response to Indeterminacy:** There are certain sorts of *natural categorizations* human beings are naturally going to categorize the world in terms of. For instance, human beings will naturally be disposed to categorize *animals* rather than *undetached animal parts*.
 - **The Response to the Response:** Maybe this sort of thing holds, at least considering these sorts of examples, *as a matter of fact*. But the interesting philosophical point is that this sort of indeterminacy is *possible in principle*. Considering non-human cases of translation, where we can't rely on so-called "natural categorizations," is thus an interesting philosophical exercise.
- **Question:** Can we think of how the indeterminacy of translation thesis might arise in the case of the heptapods?

2 Hockett on Genuinely Alien Translation and Alien Phonemics

- **The Very First Step in The Translation Procedure:** In his discussion of radical translation, Quine generally ignores issues of phonemics—the discernment of the differences in the sounds that actually *make a difference*.
- **Hockett's Example:** Consider an alien—Marty—who, in response to the linguist's pointing at his foot, says "GAHdjik." Then, some time later, in response to the same prompting, says "KAHchuk." What has he said in the two utterances?
 - **Possibility One:** Two words with two different meanings that sound somewhat similar, like "ear" and "hear."
 - **Possibility Two:** Two words with the same meaning that sound somewhat similar. (I don't really understand the example Hockett gives of this, and it's hard to think of a good example in English.)
 - **Possibility Three:** The same word twice. The apparent difference in sound is something that we notice but not something that fellow Martian speakers would pick up as significant.
- **The Inseparability between Sign and Symbol:** It's common to think that the "signs" we use to convey linguistic meaning verbally are simply *sounds*, or that the "signs" we use to convey linguistic meaning in writing are simply *marks on the page*. What signs really are, however, are *elements in a space of perceptible distinctions*, where what this space of perceptible distinctions is is not independent of the language in question.
 - **A Real Life Example from Conant:** Jim Conant recalls teaching English to students in Japan, realizing that the difficulty to follow English conversation resulted from the inability to hear distinctions in English phonemes.
- **Hockett's Intentional Anthropomorphization of the Martians:** Hockett acknowledges that his relatively simple example only works so smoothly because the alien is relatively human-like. He expresses quite a bit of skepticism that things would go so smoothly with less human-like aliens who don't make sounds in human-like ways. That, of course, is just the sort of scenario we get in *Arrival*, which makes for an interesting test case.

- **The Use of Spectrographs in Arrival:** The sounds that the heptapods emit in response to Louise's promptings are recorded and analyzed with the use of a *spectrograph*, a machine that records and depicts sound waves graphically.
 - A machine of this sort will register sound waves that are too high or low frequency for the human ear to hear.
 - This sort of analysis is common in the analysis of animal communication, for instance, vocalizations of whales and dolphins.
 - An analysis of this sort won't cover certain especially alien modes of communication that Hockett mentions such as "radio waves, or a light beam, or odors, or electrical flows, or some kind of energy transmitted through the 'sub-ether'," but it's not clear how serious these suggestions really are.
 - Unlike Ferdie, Louise is also unable to vocally reproduce the sounds that the heptapods make, so she has to do on-the-fly audio editing, splicing together various clips to try produce the sound she wants by playing back the audio.
- **Applying Hockett's Points to Written Language:**
 - **Graphemes:** The analogue of the spoken *phoneme* in written language.
 - * Different human languages have different types of graphemes, such as *logograms*, *syllabic* characters, and *alphabetic letters*.
 - * Heptapod B, as we've already gone over, is unlike any of these.
 - * Certain dimensions of difference that make a difference matter in human written language don't matter in Heptapod B, and vice versa.
 - **Interesting Example:** In human languages, such things as the thickness of a stroke doesn't change the semantically relevant sign, but in Heptapod B, it does:

"Depending on a semagram's declension, inflections could be indicated by varying a certain stroke's curvature, or its thickness, or its manner of undulation; or by varying the relative sizes of two radicals, or their relative distance to another radical, or their orientations; or various other means"

(114)

3 Further Questions

- **Utter Untranslatability?:** In "Story of Your Life," Louise considers the the possibility that there is simply no "compatibility between heptapod and human patterns of discourse," (98). What is this possibility?
 - Wittgenstein famously said "If a lion could talk, we could not understand him." The idea is that the form of our language is inextricably tied to our *form of life*, such that a radically different way of life would result in an untranslatable language.