INTERPRETING AND CLARIFYING QUINE'S INDETERMINACY THESIS

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Abstract: Since the publication of *Word & Object* in 1960, Quine's indeterminacy thesis has been a subject of great debate. This debate has generated many confusions and misinterpretations of what Quine was actually arguing. In this work, I attempt to provide an interpretation of the indeterminacy thesis based primarily on a close reading of the first two chapters of *Word & Object*. Then, I show how this interpretation can be used to dissolve some common confusions and objections to Quine's thesis.

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CHAPTER I

THE PREFACE AND FIRST CHAPTER OF *WORD & OBJECT*

Introduction

The primary aim of this thesis is to provide an interpretation of Quine's indeterminacy thesis, primarily as it is presented in *Word & Object* (1960). This interpretation will be based on a close reading of the first two chapters of *Word & Object*, with occasional supplementation from Quine's other works. The purpose of this reading is to isolate the material from these two chapters that are most important in understanding the indeterminacy thesis. Much of what Quine says, especially in the second chapter, is not entirely necessary for appreciating his arguments. Quine simply found certain concepts "worthy of treatment on their own account" (p. 27). It will therefore be helpful to filter out the excess as much as is possible.

It is my hope that this reading can serve a two-fold purpose. The first is that it will be able to serve as an introduction to Quine's indeterminacy thesis for philosophically competent readers who have, for some reason or other, not yet become familiar with Quine's work. An unfortunate side effect of Quine's highly systematic approach to philosophy is that it is often quite difficult to fully grasp his work when reading only a handful of selections. A lengthy and detailed study is required. This thesis, then, can perhaps be thought of as a shortcut.

The second purpose of this thesis is to set aright some confusions that have persisted concerning Quine's indeterminacy thesis, even among those who are quite familiar with a great deal of Quine's work. I wish to clarify these confusions that seem to have been disseminated by those who

are not open to Quine's work. As we will see in the final chapter, even one of the most able philosophers of our time exhibits a serious difficulty in wrestling with Quine's deeply counter-intuitive views. It is quite rare to come across interpretations of Quine that are sympathetic, and even more rare for accounts that are accurate. I believe that a solid understanding of Quine is incredibly difficult without an account that demonstrates both of these qualities to serve as a guide. It is my hope to eventually construct such a guide, and this is my first step towards that goal.

Here, then, is the direction of our investigation. We shall begin with a detailed reading of the preface and the first two chapters of *Word & Object*, breaking down each chapter within Quine's designated sections. We will then consider some common criticisms of the indeterminacy thesis, and attempt to apply our interpretation to these criticisms. Finally, we will examine John Searle's criticisms of the indeterminacy thesis, which represents, to a certain extent, the kind of "common sense" reaction that many readers of Quine are likely to have. It is thus important to guard against the kind of arguments employed by Searle.

Preface

While the preface of many books may be something that can easily be skipped or overlooked without serious loss in understanding of the main text, the preface of *Word & Object* is not that kind of preface. In this preface, Quine sets the foundation for the entire rest of the book, and he accomplishes this task in only the first two paragraphs. (The vast majority of the preface is, of course, dedicated to acknowledgements.) As one reads through the body of *Word & Object*, it is quite difficult to avoid getting lost in the density of Quine's writing. So it may be helpful (perhaps even necessary) to periodically remind oneself of what Quine says in the preface as one reads through the text.

Realizing the full implications of what Quine says in the preface puts the overall argument of *Word & Object* in a much clearer light. The preface provides a context that makes

the seemingly "extreme" conclusions of the book seem much more plausible (or, at the very least, the conclusions arrived at don't seem quite as strange, given the starting point of the arguments).

The most important theme of the preface (and by extension the entire book) is stated in the very first sentence: "Language is a social art" (p. ix). Like a good magician, by the time you realize that the magic trick has started, the switch has already been made. The major points on which Quine relies throughout his argument can essentially be traced back to this very first sentence. The claim that language is social seems so obvious and mundane as to hardly need stating at all. (Just a regular deck of cards, yes?) But the implications that Quine draws out from this ordinary statement are anything but trivial.

The social and public nature of language entails, according to Quine, that all linguistic meaning must ultimately be learned via the environment and observable behavior. This claim is reminiscent of the classical empiricist thesis that all knowledge must be ultimately traced back to some basic element of sense experience. (Indeed, I would argue that Quine's understanding of language is essentially just a linguistic version of this thesis, although this is not a topic that will be further investigated here.) This claim is also reminiscent of the kind of psychological behaviorism which has its roots in B.F. Skinner's work in psychology. Although Quine was apparently a close personal acquaintance of Skinner, I will argue that Quine's behaviorism is not of the same kind as Skinner's. Quine's behavorism is a *linguistic* thesis, not a *psychological* one. More will be said about this distinction later.

Quine also argues that the social nature of language results in a "systematic indeterminacy" (p. ix) of both the meanings of sentences and the references of terms. Quine's discussion of indeterminacy largely takes place within the context of his "radical translation" thought experiment in Chapter 2. However, as I shall argue in later chapters, the important point to take away from this discussion is not just that the translation of sentences between one's native

language and a radically foreign language is bogged down in an irresolvable indeterminacy. Rather, it is that this inter-linguistic indeterminacy reflects a deeper instability within the notion of linguistic meaning generally, even when restricted to one's own native language. The radical translation scenario is simply an easier scenario to accept, so it is useful as an initial presentation. What radical translation illustrates is that there are serious theoretical problems that result from relying on an "uncritical mentalism," as Quine would later say. (Quine 1970a, p. 5) The radical translation thought experiment will be discussed in detail in the second chapter of this thesis.

Finally, in the preface Quine also alludes to what would later come to be known as his peculiar brand of naturalism, as well as his holism. These two ideas, combined with his unique style of behaviorism, do all of the "heavy lifting" when it comes to Quine's arguments in *Word & Object*. These views are the important points that Quine teases out from his opening sentence: "Language is a social art" (p. ix). These three views are obviously very important to his argument in this text, as well as his overall philosophical project. It is practically impossible to understand what Quine is up to in this book without some awareness of these basic positions. Thus, special attention will be paid to them throughout the summary of the first two chapters of *Word & Object*.

Chapter 1

§1

Quine begins §1 by emphasizing what may be called the ‘physicality of discourse.’ Words denoting observable physical objects are the easiest to learn. Talk of physical objects is quite clear when compared to, say, the abstract objects of mathematics. We begin with “ordinary things,” as the title of the section indicates. These ordinary things are physical objects, and our talk of physical objects is “about as basic as language gets” (p. 3). Our physical language is the entrance point for learning language, so it is no wonder that it is also the most clearly understood.

In §1 Quine mentions Otto Neurath's well-known metaphor for science as a boat:

"Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it. The philosopher and the scientist are in the same boat" (p. 3). Here is where Quine establishes two of his crucial positions for his arguments throughout *Word & Object*. Neurath's boat metaphor, to which Quine appeals again in this book as well as in other writings, is an endorsement of *epistemological holism*. Quine is denying the possibility of any kind of foundationalist structure for human knowledge. One does not build a system of knowledge on some unshakeable foundation, for there is no such thing. Rather, we must continuously make piecemeal adjustments to various parts of our knowledge base as we discover gaps, inconsistencies, or falsehoods in our system. (Or, to return to the metaphor, we plug leaks and replace weak planks as we find them.)

Notice, though, that Quine is going one step further than Neurath. Neurath, in agreement with many of his logical positivist colleagues, took a strongly anti-metaphysical position, pushing for a reformulation of all significant language into verifiable scientific claims. Everything that cannot be formulated in this way (i.e., metaphysical claims) was dismissed as nonsense. But Quine does not share this view. Similar to how he rejected the distinction between analytic and synthetic sentences, Quine also rejected the idea of any kind of strict demarcation between science and philosophy, metaphysics included. So when Quine employs Neurath's metaphor, he is not just talking about science: "The philosopher and the scientist are in the same boat." (p. 3) Philosophy, then, is of a piece with natural science. Quine considers the two not as separate and independent disciplines. Rather, he argues that philosophy "…as an effort to get clearer on things, is not to be distinguished in essential points of purpose and method from good and bad science" (p. 3-4). Here we see Quine committing to the position that he would later refer to as his *naturalism*.

Quine's version of naturalism is a rather unique one. As he presents it here, it contains two central claims. The first, which has already been mentioned, is the insistence that philosophy and science are continuous. The second is that all theorizing, whether it leans toward philosophy or science, must take place within some particular theoretical position, employing some conceptual scheme. There is no *a priori* position from which the philosopher can examine and appraise our conceptual schemes, our systems of knowledge, without being immersed in a particular conceptual scheme as well. The following quotes illustrate this latter point well:

> …our questioning of objects can coherently begin only in relation to a system of theory which is itself predicated on our interim acceptances of objects…
>
> No inquiry being possible without some conceptual scheme, we may as well retain and use the best one we know—right down to the latest detail of quantum mechanics, if we know it and it matters. (p. 4)

It is due to the truth of naturalism, Quine argues, that we must begin our philosophizing (and scientific theorizing) in the "middle": "Analyze theory-building how we will, we all must start in the middle. Our conceptual firsts are middle-sized, middle-distanced objects, and our introduction to them and to everything comes midway in the cultural evolution of the race" (p. 4-5).

In an interesting bit of symmetry, Quine begins §1 with a point about our language of physical objects, and then closes this section by proposing to examine this language itself as a physical feature of the physical world: "I propose in this introductory chapter to ponder our talk of physical phenomena as a physical phenomenon, and our scientific imaginings as activities within the world that we imagine" (p. 5). Perhaps it is partly due to forgetfulness of this fact that we ever ended up with an analytic-synthetic distinction in the first place. After all, what sense is there to be made of a distinction between truth due to language and truth due to empirical fact when any truth about language is itself an empirical fact?

§2

In §2, Quine begins to discuss the importance of the objective world in grounding even our most subjective references. Quine uses the examples of 'Ouch' and 'Red', considered as one-word sentences (the importance of conceiving of such utterances as one-word sentences and not as referring singular terms will be made clear in our discussion of Ch. 2). We are trained in the employment of these kinds of utterances in social contexts. We must observe our environment and the behavior of others. Even with words like 'ouch', where the pain is only felt by one person, we are trained to use this word by others who do not share our pain; and we learn how the word is used from others whose pain we do not share:

> Society, acting solely on overt manifestations, has been able to train the individual to say the socially proper thing in response even to socially undetectable stimulations. The trick has depended on prior concomitances between covert stimulation and overt behaviour, notably the wincing instinct. (p. 5-6)

A brief digression is necessary at this point to address an assumption on which Quine depends in his discussion of language learning. That assumption is Quine's particular brand of behaviorism. Many have confused Quine's behaviorism with B.F. Skinner's behaviorism, although it is not clear that they can be entirely blamed for this. While Quine was a close friend and a colleague of Skinner's, Quine did not inherit his behaviorism from him. Quine admits to having been a behaviorist long before he and Skinner ever met. Indeed, Quine claims to have become a behaviorist sometime in the 1920s, pointing to his undergraduate readings of John B. Watson's *Psychology from the Standpoint of a Behaviorist* and Rudolf Carnap's *Psychologie in physikalischer Sprache* as his main inspirations (Quine 2008). However, these two sources may not be sufficiently unlike Skinner's understanding of behaviorism, so more explanation is needed to differentiate Quine's position from Skinner's.

Recent articles by Tyrus Fisher (2011) and Dagfinn Føllesdal (2011) have defended Quine's behaviorism, arguing that his particular brand is immune to the traditional objections levelled at

Skinner and his ilk, and that it is a rather plausible and relatively innocuous doctrine in Quine's hands. The most important point to remember when discussing Quine's behaviorism is that it is not a psychological thesis. Rather, it is a methodological imperative for the study of language:

> In psychology one may or may not be a behaviorist, but in linguistics one has no choice. Each of us learns his language by observing other people's verbal behavior and having his own faltering verbal behavior observed and reinforced or corrected by others. We depend strictly on overt behavior in observable situations… There is nothing in linguistic meaning, then, beyond what is to be gleaned from overt behavior in observable circumstances. (Quine 1987, p. 5)

Thus, in arguing for the indeterminacy of translation, Quine does not seek to deny the existence of mental life. (However, in other papers unrelated to the topic of indeterminacy, he does repudiate certain "mental entities" [Quine 1953 & 1985].) He is arguing that what goes on in our essentially private mental lives is simply irrelevant to any discussion of linguistic meaning. One does not need to deny the existence of our psychological inner lives in order to accept the indeterminacy of translation. Rather, one must simply recognize the evidential (epistemological) constraints on any empirical study of language.

With this point behind us, we can now return to Quine's discussion of language learning. We saw how observations of the objective world are what unifies our language for our internal experiences. Quine goes further in his praise of objectivity, noting that it is our reliance on reference to objective features of our environment which holds language together, as it were. The establishment of a uniform language over a considerable number of speakers depends on our tendency to focus on socially observable circumstances, what Quine calls the "objective pull." So despite the "chaotic subjective diversity" (p. 8) of our inner lives and personal histories which exhibit such wild variation in how each of us, as individuals, come to learn our languages, we nevertheless end up with the ability to communicate with one another quite easily and efficiently. Quine closes this section with a particularly apt metaphor:

> 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. (p. 8)

§3

As he confronts the notion of the difference between learning words and learning sentences, Quine compares his situation with that of Hume when he inquired into how it is that we learn new ideas. Since Quine is suspicious of the scientific credentials of a word like 'idea', he instead offers a linguistic formation of Hume's problem, offering that this problem "may often be by-passed by representing the words in question simply as fragments of sentence which were learned as wholes" (p. 9). So words like 'ouch', 'red', or 'rabbit' can best be thought of as one-word sentences.

Sentences are learned, Quine claims, in three ways:

(1) direct conditioning of a sentence with some non-verbal stimulation;
(2) "analogical synthesis" (p. 9), which consists in substituting certain words in sentences that were previously learned as wholes in response to stimulations that are similar to the contexts in which the original sentences were learned;
(3) the "interanimation of sentences" (p. 9), which consists in the association of sentences with other sentences, rather than with non-verbal stimulation.

Of these three, (1) is clearly the most basic form of language learning, and it is the starting point for infants as well as our linguist who is engaged in radical translation, as we shall see in the next chapter. It is only after some significant traction in the language has been gained that one moves up to the next two forms of sentence-learning.

It is within this third method of sentence-learning that the basic skills are developed which we employ in the construction of theories. Quine offers up the idea that theories should be conceived of as being composed of sentences. Some of these sentences are directly linked to

experience (observation sentences), and some are only linked to other sentences, such as statements about logic, mathematics, or highly abstract parts of physics. Still others serve to mediate between these latter sentences, most removed from experience, and those that are the simplest and most immediate reports of experience. The observation sentences are linked to certain theoretical sentences, which are then linked to our patterns of response: "…the verbal network of an articulate theory has intervened to link the stimulus with the response. The intervening theory is composed of sentences associated with one another in multifarious ways not easily reconstructed even in conjecture" (p. 11).

At this point we see Quine picking up where he left off in his 1951 paper "Two Dogmas of Logical Empiricism." In that essay, Quine commits to what Roger Gibson has called an "extreme holism" (Gibson 2000, p. 81). Quine argued that all of "our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (Quine 1951, p. 38). This formulation of Quine's holism was rightly taken as a strange and obviously false view. After all, how can we seriously suggest that every single mundane experience of our daily lives essentially serves as a potentially devastating test of our entire wealth of scientific knowledge? It does not seem plausible, for instance, that an observation of an ordinary rabbit in a field on a summer afternoon could be connected by any relevant path of linked sentences to statements about quantum mechanics. Quine was sensitive to objections of this kind, so he adjusted his view accordingly, arriving at what Gibson calls "moderate holism" (Gibson 2000, p. 82). Moderate holism accounts for the fact that not every single piece of knowledge is potentially called into question in the event of some unexpected observation. Rather, only a certain "chunk" of theory is threatened. However, Quine remains committed to the holist view that, at least in principle, every single sentence of the entirety of our knowledge is a possible candidate for revision in the event of some possible recalcitrant experience:

> In an obvious way this structure of interconnected sentences is a single fabric including all sciences, and indeed everything we ever say about the world; for the logical truths at least, and no doubt many more commonplace sentences too, are

> germane to all topics and thus provide connections. However, some middle-sized scrap of theory usually will embody all the connections that are likely to affect our adjudication of a given sentence. (p. 12-13)

Note that in this section, Quine is also clarifying his use of the term ‘theory,’ emphasizing that he is not only referring to what may be strictly called a ‘scientific theory,’ but also to what we might call knowledge, broadly construed:

> Theory may be deliberate, as in a chapter on chemistry, or it may be second nature, as is the immemorial doctrine of ordinary enduring middle-sized objects. In either case, theory causes a sharing, by sentences, of sensory supports.

§4

This section includes material that is important for Quine’s overall project in *Word & Object*, but it is not necessary for understanding the indeterminacy of translation. Thus, we can move on to the next section.

§5

Quine spends the first half of this section discussing points that reiterate his behaviorism and holism. He uses these points as the foundation of his discussion of considerations for how evidence for our theory should be weighted and evaluated. These evidential considerations, once again, are not necessary for understanding the indeterminacy of translation. However, it may well be worth revisiting behaviorism and holism again.

…words only mean as their use in sentences is conditioned to sensory stimuli, verbal and otherwise. Any realistic theory of evidence must be inseparable from the psychology of stimulus and response, applied to sentences. (p. 17)

This is a crucial passage in *Word & Object*, despite the fact that it appears, at first glance, to be not much more than a passing remark in a transitory paragraph between more substantial discussions of learning words and weighing evidence. But a careful reading of this chapter reveals that this is Quine’s first mention of linguistic meaning. Meaning, as we shall see next chapter, is the central focus of Quine’s discussion of the indeterminacy of translation, just as it was the central focus of Quine’s discussion of the analytic-synthetic distinction in “Two Dogmas”.

As we break down this remark, we notice that Quine is treating the sentence as the primary vehicle of meaning, rather than the individual word. As noted earlier, this is an important point for the next chapter. We shall see that keeping this notion in mind can help us to avoid a very common misunderstanding of the conjecture of indeterminacy of translation, a misunderstanding that is largely due to a lack of clarity and precision in Quine's early discussions of this issue. Quine seems to have perceived this problem in his later re-visitations to indeterminacy (Quine 1970a, p. 178; Quine 1987, p. 8-9).

Returning to meaning, then, we can see that Quine thinks that a word gains its meaning by being used in a sentence, and a sentence gains its meaning by being a part of the "single fabric" (p. 12) of our total system of knowledge (via his holism). How we construct our total theory of the world, in turn, depends on what weight we give to certain evidential norms, such as simplicity and conservatism. However we rank these considerations, Quine argues, what is most important is that our theory of evidence respect the methodological constraints imposed by the linguistic behaviorism he has been developing throughout this chapter.

§6

In this final section of the first chapter of *Word & Object*, it is important to notice a particular passage, which will help us guard against another potential misunderstanding of Quine's views that seems, once again, to be the result of Quine's own somewhat ambiguous writing.

After spending some time explaining the under-determination of theory by evidence, Quine uses this concept to introduce us to the indeterminacy of translation. The problem with this choice is that it seems to have led some philosophers to believe that the indeterminacy of translation is simply a special case of the under-determination of theory by evidence, where entire languages are treated as separate chunks of theory (See Rorty 1972, Chomsky 1969, and also Gaudet 2006). Quine also further exacerbated this misunderstanding by again relying heavily on under-

determination in his illustration of indeterminacy in his 1970 paper "On the Reasons for Indeterminacy of Translation."

If we set aside most of the discussion of under-determination in this section, however, and simply focus on one particular passage, it may appear that Quine is trying to differentiate the indeterminacy of translation from the under-determination of theory by evidence:

> If there were (contrary to what we just concluded) an unknown but unique best total systematization θ of science conformable to the past, present, and future nerve-hits of mankind, so that we might define the whole truth as that unknown θ, *still* we should not thereby have defined truth for actual single sentences. We could not say, derivatively, that any single sentence S is true if it or a translation belongs to θ, for there is in general no sense in equating a sentence of a theory θ with a sentence S given apart from θ. Unless pretty firmly and directly conditioned to sensory stimulation, a sentence S is meaningless except relative to its own theory; meaningless intertheoretically. (p. 23-24)

When one recalls that Quine uses the term 'theory' (as well as 'science') in a quite broad sense, it becomes clear that this is essentially equivalent to his statement of the indeterminacy of translation in the next chapter. We can regard Quine's use of the term 'theory' as referring to a language. After all, Quine has already committed to the view that a theory is composed of sentences, just as a language is. Thus, in the quote above, Quine is saying that there is no uniquely correct translation of a sentence in one language to a sentence in another language. Furthermore, by contrasting this concept with that of under-determination, Quine is attempting to show how we should not regard one as a special case of the other (even though, historically speaking, he seems to have failed in that task). Even if we had a unique, complete, and perfect global scientific theory, capable of predicting or explaining any and all observations at any point in time, this would still not be sufficient for establishing a unique translation of a sentence from one language into another. In other words, even if there were no under-determination at all, there would still remain indeterminacy.

CHAPTER II

THE SECOND CHAPTER OF *WORD & OBJECT*

Now we must turn to an examination of Chapter 2 of *Word & Object*. It is here where the bulk of the material that directly concerns Quine's argument for the indeterminacy of translation apparently resides. But this is merely apparent. As I emphasized in the commentary on the preface, the pieces of the argument have all been assembled prior to this chapter. Quine's only real task in this chapter is to tease out the implications of what has already been said, and to tidy up a few potential loose ends.

For Quine, it is a commitment to philosophizing in a scientifically respectable way that ultimately leads to the indeterminacy thesis. Science tells us that as human beings, we only have five senses. Thus science establishes empiricism, insofar as there is no evidence for any as of yet undiscovered form of extrasensory perception. Thus all that we know, or take ourselves to know, must ultimately be rooted somehow in our sensory perceptions, or "stimulations" as Quine calls them throughout this chapter. Quine would later formulate his empiricism as follows: "…whatever evidence there *is* for science *is* sensory evidence" and "…all inculcation of meanings of words must rest ultimately on sensory evidence" (Quine 1969a, p. 75).

Thus, recognizing the truth of empiricism requires that we accept a behavioristic account of linguistic meaning, since there is no way that infants and toddlers could begin to learn language except, ultimately, through connecting certain sensory stimulations with others via basic stimulus-and-response conditioning. The complexity of these connections, of course, increases

greatly over time, as language-learners transcend the basic method of ostensive direct conditioning (See §3).

The way that these connections are structured is where Quine's holism comes into play. The way that one systematizes experience is not uniquely determined by those sensory stimulations. There are vastly different ways of constructing our theoretical sentences such that they are equally faithful to our sensory experience: they explain all our past and present stimulations, and they predict all the same future stimulations. But they are incompatible in terms of content of the more theoretical sentences. This, of course, is holism in the global sense. Holism also shows itself locally. When a particular experiment does not produce the predicted result, we know that some assumption relevant to this situation is wrong. We do not know immediately which one, and we could, if we wished, pick one at random from this pool of relevant assumptions and deny it. Then we simply make adjustments elsewhere among our assumptions to accommodate the new changes to fit our systematization of past, present, and future stimulations. Quine's focus on under-determination of theory by evidence in the first chapter seems to have been his way of illustrating his holism, rather than using it to directly argue for indeterminacy of translation. Holism is only a part of the overall argument for indeterminacy. Rather, it primarily stems from his naturalism.

Quine regards his naturalism as a result of some set of scientific findings (See §1 and §6). We must always theorize from within the standpoint of one particular theory or other. There is no *a priori* standpoint from which we can evaluate and judge competing theories, since all judgments, whether they are of the most highly theoretical statements or of the most direct reports of experience, rely on *some* conceptualizations or assumptions. It is impossible to completely separate ourselves from our inherited (or chosen) conceptual scheme, construed in the broadest possible sense. We must always start "in the middle" of things, making adjustments to our conceptual scheme as needed. All of these considerations above naturally lead us to the point that

there is no sense at all to the idea of some kind of inter-linguistic meaning, a meaning that transcends any particular language and which is captured by a correct translation.

Chapter 2

§7

Quine begins §7 by setting the agenda for this chapter, and then providing the first few formulations of the indeterminacy thesis: “In this chapter we shall consider how much of language can be made sense of in terms of its stimulus conditions, and what scope this leaves for empirically unconditioned variation in one’s conceptual scheme” (p. 26). First Quine considers an “uncritical way” of representing the indeterminacy of meaning (I say ‘meaning’ here since only one language is involved in this formulation.):

> …two men could be just alike in all their dispositions to verbal behavior under all possible sensory stimulations, and yet the meanings or ideas expressed in their identically triggered and identically sounded utterances could diverge radically, for the two men, in a wide range of cases. (p. 26)

Quine then notes that this formulation may be viewed as meaningless: “one may protest that a distinction of meaning unreflected in the totality of dispositions to verbal behavior is a distinction without a difference” (p. 26). So Quine reformulates the point using terms from set theory:

> …the infinite totality of sentences of any given speaker's language can be so permuted, or mapped onto itself, that (a) the totality of the speaker's dispositions to verbal behavior remains invariant, and yet (b) the mapping is no mere correlation of sentences with equivalent sentences, in any plausible sense of equivalence however loose. (p. 27)

Finally, Quine paraphrases this idea in terms of translation:

> …manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with one another (p. 27)

It is worth noting that in the sentence that follows this one, Quine further clarifies the indeterminacy thesis by saying that it implies that two (or more) translation manuals will produce translations of a given sentence that “stand to each other in no plausible sort of equivalence however loose” (p. 27). The word ‘equivalence’ appears in both of the latter formulations of the indeterminacy thesis. Since the problem that ultimately underlies the indeterminacy of translation is our lack of an account of synonymy, or sameness of meaning, it might seem that Quine is, in effect, relying on something like a synonymy relation in his explication of indeterminacy. Quine himself apparently noticed this potential problem as he was writing *Word & Object*: “I disliked having to appeal thus to equivalence, however apologetically, in the very formulation of a thesis that casts doubt on the notions of translation or synonymy or equivalence” (Quine 1969b, p. 296-297). But Quine also points out that later in the book, he manages to formulate the indeterminacy thesis without having to appeal to a notion such as equivalence:

> …rival systems of analytical hypotheses can conform to all speech dispositions within each of the languages concerned and yet dictate, in countless cases, utterly disparate translations; not mere mutual paraphrases, but translations each of which would be excluded by the other system of translation. (p. 73)

Next, Quine specifies how we should understand his use of the term ‘language’ throughout the radical translation thought experiment. “We are concerned here with language as the complex of present dispositions to verbal behavior, in which speakers of the same language have perforce come to resemble one another; not with the process of acquisition, whose variations from individual to individual it is to the interests of communication to efface.” (p. 27) This definition of language naturally leads to questions about drawing a distinction between what goes into learning language and what counts as “collateral information” (p. 27-28), but Quine postpones considerations of this kind for now. For now, Quine is content to consider “present dispositions to verbal behavior,” where our main concern is how to construe the “*modulus* of the stimulation” (p. 28, italics in the original), or the duration of time of the stimulation which is to

count as relevant to the speaker's response. Quine says that we can simply "consult our convenience" when setting the modulus, likely because the length of the relevant stimulation will vary dramatically depending on what it is the linguist is trying to translate.

Finally, we arrive at the thought experiment of radical translation, which Quine uses as a helpful way to illustrate the indeterminacy of translation (for an interesting historical study of the evolution of this thought experiment, see Quine's [1937] and [1953] essays):

> The recovery of a man's current language from his currently observed responses is the task of the linguist who, unaided by an interpreter, is out to penetrate and translate a language hitherto unknown. All the objective data he has to go on are the forces that he sees impinging on the native's surfaces and the observable behavior, vocal and otherwise, of the native. (p. 28)

Here as well as throughout the rest of Quine's discussion of radical translation, he intentionally avoids direct reference to the environment from the perspective of the native. This is for two reasons. The first is that Quine is staying within the limits of the behaviorism that he espouses. Behavior is the only game in town when it comes to linguistic meaning. The second is that the linguist, if he wants to create the best possible translations of the native's language, will have to try to eliminate, as much as is possible, any bias that he might inadvertently bring into the process of translation via the intrusion of features of his own conceptual scheme. By focusing only on the objective data available to him, the linguist is able to build an understanding of the meaning of various native utterances on the only secure foundation available: direct conditioning to experience.

The easiest kinds of utterances to translate are the "ones keyed to present events that are conspicuous to the linguist and his informant" (p. 29). Hence we arrive at the well-known 'gavagai' example. The field linguist and the native witness a rabbit running nearby, and the native volunteers the phrase 'Gavagai.' The linguist records the phrase, and guesses that 'Rabbit' or 'Lo, a rabbit' are possible suitable translations. The linguist will later utter 'Gavagai?' as a

question to the native (assuming the linguist has figured out the native's interrogative inflection) under varying circumstances looking for assent, dissent, or neither reaction (again, assuming the linguist has figured out the native's verbal and non-verbal signals for assent and dissent; Quine offers 'Evet' and 'Yok' as the native's words for 'Yes' and 'No'.). The linguist will then have to try to make systematic sense of his results, eliminating intruding information in the environment as much as possible. If the linguist's results seem to mirror situations in which an English speaker would correspondingly assent or dissent to the query 'Rabbit?', then the linguist is gathering encouraging inductive evidence for 'Rabbit' as a translation of 'Gavagai.'

It is important to note two things at this point. The first is that "instead of speaking merely of stimulations under which the native will assent or dissent to the queried sentence, we speak in a more causal vein of stimulations that will prompt the native to assent or dissent to the queried sentence" (p. 30). What *prompts* the native's utterance of 'Gavagai' (or his assent to the query 'Gavagai?') must be the "rabbit-presenting stimulations" and all others must prompt dissent. Quine then distinguishes between prompting and eliciting for our discussion of the radical translation: "What elicits the native's `Evet' or `Yok' is a combination: the prompting stimulation plus the ensuing query `Gavagai?'" (p. 30). The second point here is that Quine implicitly distinguishes between quotations of the native's words and the native's sentences through capitalization. Thus, 'Gavagai' is a sentence, and 'gavagai' is a term. As noted earlier, indeterminacy of translation applies to sentences, since sentences are the primary bearers of meaning. Indeterminacy of reference applies to terms alone. A failure to account for this subtle difference can lead to a serious misunderstanding of Quine's use of the 'gavagai' example throughout this chapter. We will return to this point later.

§8

Quine spends much of §8 developing the notion of a stimulation. Quine has been using this term throughout the book up to this point without really developing the concept in great detail. Since stimulations are the foundation of translation, of linguistic meaning in general, then it is appropriate to spend a good amount of time on them.

First, Quine follows up on a point that closed the last section. What prompts a native's utterance of 'Gavagai' must be thought of as the stimulation, and not the rabbit itself. This way we can account for situations in which the native is prompted to utter 'Gavagai' when there isn't a real rabbit present (e.g., hallucinations, artistic representations, etc.), and also for situations in which there is a rabbit present but the native, for some reason or other, fails to notice it.

Next, Quine provides a definition of visual stimulation as a "pattern of chromatic irradiation of the eye" (p. 31). Quine is a strict physicalist (see Quine 1953 & 1985), and ultimately identifies all mental states as physical states. So if we really do grasp such things as meanings in our minds, in our brains, then one might be tempted to draw on the resources of our internal neurophysiology to explain linguistic meaning. But this would be missing the point of the very first sentence of *Word & Object*: "Language is a social art" (p. ix). In learning language, we do not have access to another person's private thoughts or neurophysiological states. These things are thus irrelevant to linguistic meaning. Only publicly observable evidence can possibly factor into meaning. In any case, even if such states of mind/brain were accessible, they would not be useful to the translator, since it is essential to language that individual idiosyncrasies in how language is learned and habits are formed are washed out. Communication must be uniform, but neurophysiology need not.

Still, we are left with this problem: how is it that we can compare stimulations between persons? How is it that the irritations by various physical forces on the sensory surfaces of the

native are supposed to be socially observable? Quine's response is that such stimulations are "intersubjectively checked to some degree by society and linguist alike, by making allowances for the speaker's orientation and the relative disposition of objects" (p. 31). In his later writings, Quine expands on this brief comment, citing the role of empathy in translation, and language learning generally. (Quine 1992, p. 42ff.) The linguist is trying to project himself into the situation of the native without bringing along his own forms of concepts and biases. And it does not seem unreasonable that the linguist, who is standing right next to the native throughout his task of radical translation, would be able to reasonably guess how the physical forces would be affecting him if he were occupying the native's location. (In Quine's *Pursuit of Truth* and *From Stimulus to Science*, among other various articles, he made considerable adjustments and updates to his concept of stimulations. Furthermore, in the preface to the 2013 edition of *Word and Object*, Dagfinn Follesdal briefly describes some of Quine's unrealized plans for a revised edition of the book, which involved significant changes to Quine's original understanding of stimulation.)

The modulus of visual stimulations should not be viewed as "momentary static irradiation patterns", but rather as "evolving irradiation patterns of all durations up to some convenient limit… Furthermore we may think of the ideal experimental situation as one in which the desired ocular exposure concerned is preceded and followed by a blindfold" (p. 31-32). In addition to this temporal window, Quine also specifies that a visual stimulation should be treated in its "spatial entirety" (p. 32). Sometimes the subject's entire visual field is relevant for a given stimulus. Additionally, not all impacts of light on the retina will register a response, since many visual details are not actually processed outside of the area on which one is focused.

With these details about stimulations in place, Quine says that we have the ingredients needed to formulate a "crude concept of empirical meaning. For meaning, supposedly, is what a sentence shares with its translation; and translation at the present stage turns solely on

correlations with non-verbal stimulation" (p. 32). Quine then defines the affirmative stimulus meaning of a sentence as "the class of all the stimulations… that would prompt… assent" for a given speaker, and the negative stimulus meaning of a sentence as the class of all the stimulations that would prompt dissent for a given speaker (p. 32). Stimulus meaning, then, is defined as the ordered pair of the affirmative and negative stimulus meanings. So for the linguist to translate 'Gavagai' as 'Rabbit' is to say that they have the same stimulus meaning. Stimulus meaning, Quine notes, must be contextualized not only to the modulus of the stimulations in question, but also to a given speaker at a given time, since speech patterns have a tendency to evolve, not only between individuals, but also within the same individual over time. "Fully ticketed, therefore, a stimulus meaning is the stimulus meaning *modulo n* seconds of sentence *S* for speaker *a* at time *t*" (p. 33). Of course, this account of stimulus meaning has only been explicitly laid out for visual stimulus meaning. An account of global stimulus meaning would require similar accounts for each of the other senses, such that the stimulus meaning of a sentence for a speaker at a time would include the total set of stimulations on all of the speaker's sensory surfaces for the duration of the set modulus. Quine does not see the need to actually lay out this entire account, for its absence here will not affect his philosophical point in this chapter.

Quine takes a brief detour from his account of stimulations to ponder a particular word choice used in his definition of stimulus meaning: the strong conditional 'would'. Quine explains that he uses this term in the sense of a disposition, such as when we explain the concept of solubility in water. Quine then identifies this sense of disposition as being "some subtle structural condition," which Quine later clarifies as meaning a kind of not fully understood physical mechanism (Quine 1973, p. 8-15). So to say that a person would assent or dissent to a given sentence is simply to refer to whatever causal, physiological process occurs between stimulus and response. The exact details of this process, as Quine has stressed in the first chapter, are not directly relevant to accounting for linguistic meaning.

Returning to the discussion of stimulations, Quine says that stimulations should not be understood as unique, particular events in time, but rather as "a universal, a repeatable event form" (p. 34). Hence we do not compare the qualitative similarity of two different stimulations, but rather identify two stimulations as the same stimulation, occurring twice. Quine cites the presence of the strong conditional in his definition of stimulus meaning as the primary reason for this construal of stimulations:

> For, consider again the affirmative stimulus meaning of a sentence *S*: the class Σ of all those stimulations that *would* prompt assent to *S*. If the stimulations were taken as events rather than event forms, then Σ would have to be a class of events which largely did not and will not happen, but which would prompt assent to *S* if they were to happen. Whenever Σ contained one realized or unrealized particular stimulatory event σ, it would have to contain all other unrealized duplicates of σ; and how many are there of *these*? Certainly it is hopeless nonsense to talk thus of unrealized particulars and try to assemble them into classes. Unrealized entities have to be construed as universals. (p. 34, italics in original)

Thus, for considerations that are both ontological and pragmatic, Quine adopts an understanding of stimulations as universals. (See also Quine 1948.)

Finally, we return to the notion of holism, and see how it connects with this account of stimulus meaning. In Quine's "Two Dogmas", we saw his extreme holism, which located the empirical import of scientific claims in the entire corporate body of science. Here we see Quine explaining how he modified his view to a more moderate holism. Quine points out that the notion of stimulus meaning for sentences offers us a way into a foreign theory (i.e., language, conceptual scheme), since the stimulus meaning provides us with a suitable behavioral criterion for establishing some semblance of empirical meaning. It gives us a wedge for entering a language without being familiar with the language as a whole. So even though for a great deal of a given language, the meanings of sentences are dependent on further sentences for their meaning, and so on, we can seek firm ground on this "basic level," without having any knowledge of the "higher level."

§9

Quine begins this section by explaining the distinction between occasion sentences and standing sentences. Occasion sentences are those that "command assent or dissent only if queried after an appropriate prompting stimulation" (p. 35-36). Standing sentences can be prompted by certain stimulations as well, but more importantly, they can occur independently of any current stimulation, completely unprompted. This distinction, in true Quinean fashion, is not a rigid or absolute one. Rather, it is relative to the modulus. "An occasion sentence modulo n seconds can be a standing sentence modulo $n - 1$" (p. 36). The stimulations that belong to neither the affirmative nor negative stimulus meaning of an occasion sentence are those that would inhibit a response to the query. The same definition applies as well to stimulations that belong to neither the affirmative nor the negative stimulus meaning of a standing sentence, except that this class of stimulations would also include irrelevant stimulations, "which neither prompt nor inhibit" (p. 36).

The stimulus meaning of an occasion sentence is defined as a "full cross-section of the subject's evolving dispositions to assent to or dissent from a sentence" (p. 36). Standing sentences, since they are less affected by a given prompting stimulus, do not have their "intuitive meaning" reflected well in stimulus meaning. Thus, the rest of this section is primarily focused on occasion sentences alone.

Occasion sentences, though their stimulus meanings are a closer approximation to our intuitive concept of meaning, still fall short of establishing a synonymy relation. The problem is that the subject's response can often "depend excessively on prior collateral information as a supplement to the present prompting stimulus" (p. 37). The subject might have just witnessed something earlier that sways his verdict. For example, he may have recently heard another native utter 'gavagai' without having had the same stimulation that prompted the other native's

utterance. Quine offers the example of the "rabbit-fly," an hypothetical creature that is known for being in the presence of rabbits. The native may have not gotten a clear sight of an animal scurrying by, but he does clearly spot a rabbit-fly. Such a stimulation would belong to the affirmative stimulus meaning of 'Gavagai' for the native, but not that of 'Rabbit' for the linguist.

An ideal affirmative stimulus meaning for 'Gavagai' would include stimulations that would prompt assent based on an understanding of the word alone, and would not be affected by collateral information, unlike the above examples. But our problem is precisely that we have no way of drawing a strict distinction between collateral information and linguistic meaning:

> …we have made no general experimental sense of a distinction between what goes into a native's learning to apply an expression and what goes into his learning supplementary matters about the objects concerned… There is no evident criterion whereby to strip such effects away and leave just the meaning of 'Gavagai' properly so-called—whatever meaning properly so-called may be… What we objectively have is just an evolving set of dispositions to be prompted by stimulations to assent to or dissent from sentences. These dispositions may be conceded to be impure in the sense of including worldly knowledge, but they contain it in a solution which there is no precipitating (p. 38-39).

Thus, Quine appeals to essentially the same general sentiment that motivated his arguments against the analytic-synthetic distinction. There is no behavioral criterion for distinguishing between facts purely about language and empirical facts. The only prospects for such a criterion appeal to mentalistic notions, and therefore cannot be relevant to an account of language, which is an essentially public phenomenon.

The considerations in the section serve Quine's purpose of demonstrating that stimulus meaning is not equivalent to the ordinary, intuitive notion of meaning. Nevertheless, stimulus meaning is all that our field linguist has to go on when he engages in radical translation. Quine also clarifies that the linguist in this case is translating "not by identity of stimulus meanings, but by significant approximation of stimulus meanings" (p. 40).

§10

The stimulus meanings of words are subject to variation due to collateral information, some stimulus meanings varying more than others. Quine compares 'Red' with 'Rabbit', noting that 'Red' will show extremely little variation, resulting in a stimulus meaning that is quite similar to an ordinary understanding of the meaning of 'Red'. 'Rabbit', as the examples throughout this chapter suggest, will tend to be subject to a great deal of variation due to intrusive information. 'Bachelor' will show even more such variation:

> An informant's assent to it is prompted genuinely enough by the sight of a face, yet it draws mainly on stored information and none on the prompting stimulation except as needed for recognizing the bachelor friend concerned. As one says in the uncritical jargon of meaning, the trouble with `Bachelor' is that its meaning transcends the looks of the prompting faces and concerns matters that can be known only through other channels. (p. 42)

Thus the stimulus meaning of 'Bachelor' will be even more unlike its intuitive meaning than the stimulus meaning of 'Rabbit'. While every English speaker knows the meaning of 'Bachelor' well enough, only those who share certain acquaintances will also have similar stimulus meanings for it.

So we find that stimulus meaning will tend to resemble intuitive accounts of meaning as the sentences in question are less subject to variation due to collateral information (such as with 'Red'). Quine thus arrives at his definition of an observation sentence:

> Occasion sentences whose stimulus meanings vary none under the influence of collateral information may naturally be called observations sentences, and their stimulus meanings may without fear of contradiction be said to do full justice to their meanings. (p. 42)

Given Quine's tendency to deny absolute distinctions throughout much of his work, one might be puzzled by this definition, seemingly drawing a line between sentences whose stimulus meanings

vary due to collateral information, and those that do not. However, Quine is quick to improve this language to something more behaviorally appropriate:

> …we may speak of degrees of observationality… What we have is a gradation of observationality from one extreme, at 'Red' or above, to the other extreme at 'Bachelor' or below… For, in behavioral terms, an occasion sentence may be said to be the more observational the more nearly its stimulus meanings for different speakers tend to coincide. Granted, this definition fails to give demerit marks for the effects of generally shared information, such as that about the rabbit-fly. But, as argued in § 9, I suspect that no systematic experimental sense is to be made of a distinction between usage due to meaning and usage due to generally shared collateral information. (p. 42-43)

All that is necessary for being an observation sentence, then, is simply for that occasion sentence to be on the higher end of the scale of observationality.

Quine's definition of observationality implies that it is a social concept. It requires a community of speakers so that we can compare stimulus meanings. Stimulus meaning itself, however, requires only one speaker, and the next section investigates this notion.

§11

Quine begins this section by noting a curious asymmetry between the stimulus meanings of 'Bachelor' and 'Unmarried man' when considered as either between two speakers or within only one speaker. In the former case, the stimulus meanings of the two sentences are not identical. In the latter case, however, we find that the stimulus meanings are identical. For a single individual, the stimulus meanings of 'Bachelor' and 'Unmarried man' are the same; the stimulations that would prompt assent or dissent for the one would do the same for the other. Thus we find that "stimulus synonymy, or sameness of stimulus meaning," works equally well for non-observational occasion sentences (such as 'Bachelor') as it does for highly observational occasion sentences (such as 'Red') if we restrict ourselves to considering one speaker (p. 46). 'Bachelor' and 'Unmarried man' are stimulus synonymous for one speaker, but Quine rejects that

the two sentences are synonymous on an intuitive account of meaning (or, rather, he rejects that there is any sense to such a claim). “Very well; here is a case where we may welcome the synonymy and let the meaning go” (p. 46).

Additionally, we can say, in a sense, that ‘Bachelor’ and ‘Unmarried man’ are stimulus-synonymous for the whole community, since it is true for each and every speaker within it. The same could also be true of a bilingual speaker when we expand the hypothetical to include two communities speaking two different languages. (Quine uses a Spanish example: ‘Soltero’ as stimulus-synonymous with ‘Bachelor’.) This would of course need to be checked by confirming that the bilingual speaker’s communication between the two communities is fluent and comparable to that of other bilinguals.

Quine then reminds us that even this kind of intrasubjective stimulus synonymy is not immune to the intrusion of collateral information:

> …consider the Himalayan explorer who has learned to apply `Everest' to a distant mountain seen from Tibet and `Gaurisanker' to one seen from Nepal. As occasion sentences these words have mutually exclusive stimulus meanings for him until his explorations reveal, to the surprise of all concerned, that the peaks are identical. His discovery is painfully empirical, not lexicographic; nevertheless the stimulus meanings of `Everest' and `Gaurisanker' coincide for him thenceforward. (p. 49)

In an endnote, Quine admits that this example is not technically geographically accurate, but this is beside the point, since our entire discussion of radical translation is speculative anyway. Quine’s point is to highlight the idea that “two terms can in fact be coextensive, or true of the same things, without being intrasubjectively stimulus-synonymous as occasion sentences” (p. 51). Intrasubjective stimulus synonymy, it seems, will not improve the situation of the field linguist significantly beyond where he found himself using his original methods.

§12

In this section, Quine presents in more detail his infamous ‘gavagai’ example. As Quine would later note, it is precisely this example that received more attention than it should have, and it had the effect of contributing to a fairly common misreading of Quine’s intentions in this section, and consequently in this chapter as a whole. In “On the Reasons for Indeterminacy of Translation”, Quine says:

> My *gavagai* example has figured too centrally in discussions of the indeterminacy of translation. Readers see the example as the ground of the doctrine, and hope by resolving the example to case doubt on the doctrine. The real ground of the doctrine is very different, broader, and deeper. (Quine 1970a, p. 178, italics in original)

It will be helpful, then, to keep this point in mind as we examine the ‘gavagai’ example, and try to sort out exactly what it is that Quine was actually up to in this section.

The central point of this chapter is rather explicitly stated in the first paragraph of this section: “Stimulus synonymy of the occasion sentence ‘Gavagai’ and ‘Rabbit’ does not even guarantee that ‘gavagai’ and ‘rabbit’ are coextensive terms, terms true of the same things” (p. 51). There are two things to take notice of in this statement. The first is that Quine has begun this section with an inversion of the point he used as the conclusion of the previous section. At the end of §11, Quine said that coextensiveness is not sufficient for stimulus-synonymy. In the beginning of §12, Quine says that stimulus-synonymy is not sufficient for coextensiveness. The second is that Quine is using capitalization as a way of distinguishing between words and sentences. Failure to keep track of this distinction can lead to a serious misreading of Quine’s arguments in this book.

Quine would later adopt a distinct terminology for the indeterminacy of reference of terms, which is the subject of §12, as opposed to the indeterminacy of translation of sentences. Quine employed many different terms to describe the indeterminacy of reference, including

ontological relativity and inscrutability of reference (Quine 1969a). We can treat all three expressions as naming the same thesis (and Quine seems to have thought so as well [Quine 1986, p. 459]). But for the sake of clarity as well as efficiency, we will reserve the term ‘indeterminacy’ for referring to the indeterminacy of translation of sentences, and the term ‘inscrutability’ exclusively for the indeterminacy of reference.

Quine begins this section by stressing that stimulus synonymy of the *sentences* ‘Gavagai’ and ‘Rabbit’ is not sufficient for establishing the coextensiveness of the *terms* ‘gavagai’ and ‘rabbit’. (Throughout much of this section, Quine sometimes uses the misleading phrase “synonymy of terms”. This is strange, since Quine has earlier stressed that terms only have meaning by virtue of their use in sentences. We shall instead speak of coextension to ward off any potential confusion.) So even if we assume that we have established the sameness of stimulus meanings of ‘Gavagai’ and ‘Rabbit’, we still have not established that the term ‘gavagai’ refers to a “whole enduring rabbit”, as the field linguist would be naturally inclined to suspect. The term ‘gavagai’ could just as easily refer to rabbit-stages, temporal segments of a rabbit, undetached rabbit parts, the “single though discontinuous potion of the spatiotemporal world that consists of rabbits”, or the recurring universal of “rabbithood” (p. 52). Quine considers the natural objection that all we need to settle this “imagined indecision” (p. 52) is just a little more precision in our pointing and indicating along with the prompting stimulation. But Quine argues that this cannot solve the problem:

> Point to a rabbit and you have pointed to a stage of a rabbit, to an integral part of a rabbit, to the rabbit fusion, and to where rabbithood is manifested. Point to an integral part of a rabbit and you have pointed again to the remaining four sorts of things; and so on around. Nothing not distinguished in stimulus meaning itself is to be distinguished by pointing, unless the pointing is accompanied by questions of identity and diversity: `Is this the same gavagai as that?', `Do we have here one gavagai or two?'. Such questioning requires of the linguist a command of the native language far beyond anything that we have as yet seen how to account for.” (p. 52-53)

The reason that we cannot assume the construal of reference of the term 'gavagai' that is most natural to us is that how we conceive of rabbits is a peculiar feature of our own conceptual and referential apparatus:

> …our own various auxiliaries to objective reference: our articles and pronouns, our singular and plural, our copula, our identity predicate. The whole apparatus is interdependent, and the very notion of term is as provincial to our culture as are those associated devices. The native may achieve the same net effects through linguistic structures so different that any eventual construing of our devices in the native language and vice versa can prove unnatural and largely arbitrary. (Cf. § 15.) Yet the net effects, the occasion sentences and not the terms, can match up in point of stimulus meanings as well as ever for all that. Occasion sentences and stimulus meaning are general coin; terms and reference are local to our conceptual scheme." (p. 53)

The native can conceive of objects in the world in a completely strange and radically different way. The native can employ a referential apparatus that is incapable of direct translation into our own language term for term, phrase for phrase, without significant interpretational decisions on the part of the linguist. These interpretational decisions would necessarily impose some kind of conceptual scheme onto the native, thereby going far beyond any evidence present in stimulus meaning.

At this point it may be useful to recall Quine's use of the term 'ontological relativity' to describe this situation. Although the native's conceptual scheme may be radically different from our own, and we can still manage to come up with acceptable translations of sentences of the native's language into sentences of English that would not hinder communication. We could also speak in an intuitive, uncritical way and say that these translations would retain the meaning of the original sentences, despite varying referents of the component terms. The idea is that our translation manual would systematically offset any referential incompatibilities of particular pairs of sentences by making changes elsewhere in the manual:

> We could equate a native expression with any of the disparate English terms `rabbit', `rabbit stage', `undetached rabbit part', etc., and still, by compensatorily juggling the

> translation of numerical identity and associated particles, preserve conformity to stimulus meanings of occasion sentences. (p. 54)

The reason that we see the same general kind of indeterminacy affecting the translation of sentences as well as terms is that when “other languages than our own are involved, coextensiveness of terms is not a manifestly clearer notion than synonymy or translation itself” (p. 54). When restricted to our own language, coextension has a relatively simple definition, though we shall not be concerned with the details of it here.

A final important part of this section is Quine’s introduction of his definition of stimulus-analyticity: “I call a sentence stimulus-analytic for a subject if he would assent to it, or nothing, after every stimulation (within the modulus)” (p. 55). Quine notes that this definition has an analogous definition for terms rather than sentences. This requires a prior translation of logical particles such as ‘all’, ‘are’, and ‘=’, which is the subject of the next section.

§13

Quine offers three “semantic criteria” (p. 57) for the translation of truth functions from the native language. The addition of the term for negation will change a short sentence to which the native would assent into one from which the native would dissent. The conjunction function creates a compound that prompts assent always and only when each individual component also prompts assent. The alternation function creates a compound that prompts dissent only when each individual component also prompts dissent. Quine then notes:

> When we find that a native construction fulfills one or another of these three semantic criteria, we can ask no more toward an understanding of it. Incidentally we can then translate the idiom into English as ‘not’, ‘and’, or ‘or’ as the case may be, but only subject to sundry humdrum provisos; for it is well known that these three English words do not represent negation, conjunction, and alternation exactly and unambiguously. (p. 58)

So by translating truth functions, we are not necessarily finding native equivalents of the English words ‘not’, ‘and’, or ‘or’. Further truth functions can also be constructed using the same basic method for negation, conjunction, and alternation.

Quine takes a brief digression into the problems of this approach when applied to an hypothetical culture with a “prelogical mentality” (p. 58). If we suppose that the natives accept sentences of the form ‘*p* and not *p*’ as true, then how can we go about translating such sentences? Quine seems to take the view that we should, in our translations, impose our own logic upon their utterances. As a general maxim of good translation, we should interpret patently absurd sentences as being due to some unknown difference between languages, rather than a fundamental logical failure.

Returning to our original case, let us suppose that we have completely translated the native’s logical laws as far as truth functions are concerned. The natural next step in translating logic, Quine suggests, is to move on to the categoricals (i.e., All x are y; No x are y; Some x are y; Some x are not y). The problem with translating these kinds of statements, however, is the same as what we saw in the previous section with the ‘gavagai’ example:

> The difficulty is fundamental. The categoricals depend for their truth on the objects, however external and however inferential, of which the component terms are true; and what those objects are is not uniquely determined by stimulus meanings. Indeed the categoricals, like plural endings and identity, are part of our own special apparatus of objective reference, whereas stimulus meaning is, to repeat § 12, common coin. Of what we think of as logic, the truth-functional part is the only part the recognition of which, in a foreign language, we seem to be able to pin down to behavioral criteria. (p. 61)

§14

In this section, Quine revisits the intuitive notions of synonymy and analyticity, picking up where he left off after “Two Dogmas” and applying the lessons learned from the discussion of

the scenario of radical translation. Synonymy should be distinguished between a broad and a narrow type. Synonymy in the narrow sense is

> …what Carnap calls intensional isomorphism, involving certain part-by-part correspondences of the sentences concerned… But such variant versions can be defined on the basis of the broader one. Synonymy of parts is defined by appeal to analogy of roles in synonymous wholes; then synonymy in the narrower sense is defined for the wholes by appeal to synonymy of homologous parts. (p. 62).

Thus we can simply focus on the broad sense, and leave the narrow sense behind.

The broad sense, Quine says, is such that “two sentences command assent concomitantly and dissent concomitantly, and this concomitance is due strictly to word usage rather than how things happen in the world” (p. 62). Quine acknowledges that the standard expression of this type of synonymy would refer to truth values rather than assent and dissent, but if we are to make sense of the notion in terms of verbal behavior, then this formulation should be preferred.

When considering occasion sentences, stimulus synonymy does fairly well in realizing synonymy in the broad sense, as we saw above in §9 through §11. The same is true of standings sentences when the variability of assent and dissent is not significantly different from that of occasion sentences. As this variability decreases, however, so does the resemblance of stimulus synonymy to synonymy in the broad sense. We can adjust the modulus of the stimulations in an attempt to “tighten the relation of stimulus synonymy”, but lengthening the modulus to very long periods can adversely affect the usefulness of the stimulus meanings in question (p. 63). “Lengthening the modulus enriches stimulus meanings and tightens stimulus synonymy only as it diminishes scrutability of stimulus synonyms.” (p. 63). A very long modulus will leave open the possibility that new intrusions of collateral information could occur, or changes in the meaning of the subject’s language (if we may speak uncritically). Thus, stimulations that are likely to give us at least some clue toward stimulus synonymy will generally need to have a modulus that is longer than an instantaneous moment, and shorter than, say, a month.

Holism again rears its head, which should be no surprise in a section titled 'Synonymous and Analytic Sentences'. A major component of Quine's argument against the analytic-synthetic distinction in his 'Two Dogmas' was that theory construction (in the broadest possible sense) proceeds holistically. As we've noted above, Quine advanced an "extreme holism" in that classic essay, but weakens that view to a more "moderate holism" in *Word & Object*:

> The trouble lies in the interconnections of sentences. If the business of a sentence can be exhausted by an account of the experiences that would confirm or disconfirm it as an isolated sentence in its own right, then the sentence is substantially an occasion sentence. The significant trait of other sentences is that experience is relevant to them largely in indirect ways, through the mediation of associated sentences. Alternatives emerge: experiences call for changing a theory, but do not indicate just where and how. Any of various systematic changes can accommodate the recalcitrant datum, and all the sentences affected by any of those possible alternative readjustments would evidently have to count as disconfirmed by that datum indiscriminately or not at all. Yet the sentences can be quite unlike with respect to content, intuitively speaking, or role in the containing theory. (p. 64)

Quine then digresses into a brief response to part of an essay by H.P. Grice and P.F. Strawson, "In Defense of a Dogma" (1956), which itself was a response to Quine's 'Two Dogmas'. The details of Quine's remarks here are not important for our purposes. However, it is intersting that in Grice and Strawson's essay, part of their argument appears to be that it is a *reductio ad absurdum* of Quine's view on meaning if it implies that talk of "correct or incorrect *translation*" is meaningless (Grice and Strawson 1956, p. 146). In hindsight, this is rather humorous. It is as if Quine read this response, completely agreed with this implication, and then drafted his thought experiment of radical translation to show that it isn't really the problem that Grice and Strawson thought it was.

Having compared intuitive synonymy with stimulus synonymy, Quine then does the same with analyticity, which is commonly regarded as interdefinable with synonymy (or, at least, it was around the time of *Word & Object*). Quine identifies analyticity as an intuitive concept, which states that an analytic sentence is "true purely by meaning and independently of collateral

information" (p. 65). Quine points out that philosophical tradition has sometimes regarded analytic truths as coextensive with *a priori* and necessary truths. Quine is not concerned with whether this is true. Instead, he comments that none of these three categories of truths have been defined in terms of observable behavior. Quine speculates on what such a definition of analyticity may look like: "the analytic sentences are those that we are prepared to affirm come what may" (p. 66). But this definition needs some cleaning up, Quines argues, with respect to 'what may'. It may be objected that we would give up the analyticity of 'No bachelor is married' if we found a married bachelor. Quine sees no way of answering the objection without at least implicitly relying on analyticity itself. So Quine suggests modifying 'come what may' as 'come what stimulation may', which is "virtually the definition (§12) of stimulus analyticity" (p. 66).

We saw with stimulus synonymy that we could socialize it, and thereby improve its scope. Quine suggests that we can do the same for stimulus-analyticity, taking sentences as socially stimulus-analytic if they are "stimulus-analytic for almost everybody" (p. 66). But this definition would apply equally to sentences such as 'There have been black dogs' or '2+2=4'. So we find, unsurprisingly, that social stimulus analyticity does not approximate its traditional intuitive counterpart any better than stimulus synonymy did. Quine recognizes them as "not behavioristic reconstructions of intuitive semantics, but only a behavioristic ersatz" (p. 66).

Quine ends this section with some speculation on the intuitions that enforce our sense of the traditional picture of analyticity and synonymy. The details here are not important for our purposes, but there is one important statement that helps to clarify Quine's position on analyticity: "The intuitions are blameless in their way, but it would be a mistake to look to them for a sweeping epistemological dichotomy between analytic truths as by-products of language and synthetic truths as reports on the world" (p. 67). This quotation is important because Quine is trying to clarify his arguments in 'Two Dogmas'. After reading 'Two Dogmas', it is easy to come away with the sense that Quine was arguing that there is *no possible way* to draw a distinction

between analytic and synthetic sentences. But this is not what Quine had intended to say. His point was rather that there is no way of drawing that distinction that would be able to do the kind of *epistemological work* that the logical positivists had wanted it to do (Hylton 2007, p. 68-74).

§15

Quine begins this section with a summary of the possible kinds of results that our field linguist can achieve, given his methodological situation:

> (1) Observation sentences can be translated. There is uncertainty, but the situation is the normal inductive one. (2) Truth functions can be translated. (3) Stimulus-analytic sentences can be recognized. So can the sentences of the opposite type, the "stimulus-contradictory" sentences, which command irreversible dissent. (4) Questions of intrasubjective stimulus synonymy of native occasion sentences even of non-observational kind can be settled if raised, but the sentences cannot be translated." (p. 68)

These are quite obviously very limited results. The linguist cannot do much toward gaining an understanding of the native language based on these tools alone. So how does the linguist progress from here? He constructs analytical hypotheses: "He segments heard utterances into conveniently short recurrent parts, and thus compiles a list of native "words." Various of these he hypothetically equates to English words and phrases, in such a way as to conform to (l)-(4). Such are his analytical hypotheses" (p. 68). Although the concept of analytical hypotheses is only being introduced now at the tail end of the chapter on radical translation, it should not be thought that analytical hypotheses can only be constructed after the work in (1)-(4) has been completed. Indeed, Quine points out that (4), intrasubjective stimulus synonymy, will be practically fruitless if not guided by tentative analytical hypotheses.

Quine notes that our field linguist need not be absolutely strict in making sure his analytical hypotheses conform universally to (1)-(4): "the neater the analytical hypotheses, the more tolerance" (p. 69). For example, if a native socially stimulus-analytic sentence is translated as 'All rabbits are men reincarnate', the translator must have had considerable reason for this. If

no stimulations would prompt the natives to dissent from this sentence, then our linguist would have had to make significant adjustments elsewhere among his analytical hypotheses to allow for an English translation that is also socially stimulus-analytic. Considerations of simplicity (and reliance on Quine's holism), then, allow for tolerance in this kind of situation. In the average case, however, Quine argues that "the more absurd or exotic the beliefs imputed to a people, the more suspicious we are entitled to be of the translations; the myth of the prelogical people marks only the extreme. For translation theory, banal messages are the breath of life" (p. 69).

Analytical hypotheses, as defined above, should not be seen as forming a list of translations, word for word, phrase for phrase. There may be cases where a native word may be translated as an English phrase, or a native phrase as an English word, depending on the context. An implication of this, however, is that we will now need additional instructions to explain these kinds of choices of translation.

> Since there is no general positional correspondence between the words and phrases of one language and their translations in another, some analytical hypotheses will be needed also to explain syntactical constructions. These are usually described with help of auxiliary terms for various classes of native words and phrases. Taken together, the analytical hypotheses and auxiliary definitions constitute the linguist's jungle-to-English dictionary and grammar. The form they are given is immaterial because their purpose is not translation of words or constructions but translation of coherent discourse; single words and constructions come up for attention only as means to that end. (p. 70)

In addition to the considerations above, another reason why these auxiliaries are necessary is because throughout the process of radical translation, Quine has made "no essential use of a distinction between word and phrase" (p. 62). This is partly because Quine is suspicious of finding an acceptable criterion of identity for a word (p. 13-14), which is in line with Quine's well-known dictum: "No entity without identity" (Quine 1958, p. 20; or Quine 1969, p. 23). Furthermore, the methods available to the field linguist in his elicitations of the native provide relatively meager results: "stimulus meanings never suffice to determine even what words are

terms, if any, much less what terms are coextensive" (p. 70). Thus, our field linguist must go beyond the immediate behavioral evidence and construct analytical hypotheses so that he can construct a fuller and more coherent account of the native's language:

> The method of analytical hypotheses is a way of catapulting oneself into the jungle language by the momentum of the home language. It is a way of grafting exotic shoots on to the old familiar bush-to recur to the concluding metaphor of § 2-until only the exotic meets the eye. From the point of view of a theory of translational meaning the most notable thing about the analytical hypotheses is that they exceed anything implicit in any native's dispositions to speech behavior. By bringing out analogies between sentences that have yielded to translation and others they extend the working limits of translation beyond where independent evidence can exist." (p. 70)

Recall the three methods of learning sentences that Quine presented in §3. Here we see the field linguist transcending direct conditioning and employing analogical synthesis in order to construct analytical hypotheses. Once these have been thoroughly constructed, the linguist can presumably move on to the interanimation of sentences.

The possible yield of the linguist's methods listed above in (1)-(4) does not exhaust all possible evidence. As Quine mentioned in §11, the linguist can take the time to become bilingual, and then resume the construction of a translation manual. In such a case, (1)-(4) above would be amended as follows: "(1') All occasion sentences can be translated. Point (4) drops as superfluous. But even our bilingual, when he brings off translations not allowed for under (1')-(3), must do so by essentially the method of analytical hypotheses, however unconscious" (p. 71). Thus, while the bilingual linguist may gain some ground with respect to non-observational occasion sentences, he is not significantly better off than our original field linguist.

Finally, we arrive at Quine's formulation of the final product of our hypothetical field linguist's labors—the translation manual:

> [T]he linguist's finished jungle-to-English manual has as its net yield an infinite semantic correlation of sentences: the implicit specification of an English sentence,

> or various roughly interchangeable English sentences, for every one of the infinitely many possible jungle sentences. Most of the semantic correlation is supported only by analytical hypotheses, in their extension beyond the zone where independent evidence for translation is possible. *That those unverifiable translations proceed without mishap must not be taken as pragmatic evidence of good lexicography, for mishap is impossible*. (p. 71, italics added)

This final sentence is a crucial one, for this is the point that distinguishes the indeterminacy of translation as a distinct and separate idea from the under-determination of theory by evidence. In translation, there is no “fact of the matter”, as Quine would put it in later works (Quine 1979). While evidence for our scientific understanding of the physical world may not establish one unique theory that fits that evidence (as is implied by Quine’s holism), there is nonetheless a fact about how the physical world actually is. Only one “final” scientific account of the universe can actually be true to the facts. It just so happens that we are in an epistemological situation that prevents us from ever demonstrating that we have that account, even if we do. Translation, on the other hand, is not like this. The problem is not merely epistemological, it is ontological. If we assume that we have all of the physical facts about every feature of the universe, this would still not suffice to determine a uniquely correct translation of a native sentence into an English sentence (provided that the native sentence is not a highly observational occasion sentence). There will be multiple equally good translations of the native sentence, in that they equally match all of the behavioral and dispositional evidence. There will be at least two such translations, which Quine refers to here as “incompatible” (p. 72).

Quine would later reformulate this way of explaining the two rival translation manuals in response to his misgivings, mentioned earlier, about the behavioral import of notions such as “equivalence”. In his reply to Gilbert Harman’s essay in *Words and Objections* (Quine 1969b), Quine accepts Harman’s suggested formulation, saying that for a given native sentence, two translators using two manuals that both match all dispositions to verbal behavior may disagree on how that sentence should be translated. This way the point is put in terms of dispositions to

behavior, rather than relying on the notion that the two manuals are somehow inherently incompatible, which seems to be just an inversion of the equivalence notion that Quine was uncomfortable with in his original formulation. In *Pursuit of Truth* (Quine 1992), Quine explains this incompatibility as saying that if we translated a paragraph of native sentences into English using two rival translation manuals, alternating between manuals with each sentence, the resulting translation would be incoherent.

Quine closes this section with a point that has gone unnoticed or uncomprehended by many commentators on the indeterminacy thesis: "…one has only to reflect on the nature of possible data and methods to appreciate the indeterminacy" (p. 72). As I emphasized in the previous chapter, all of the real work in Quine's argument for the indeterminacy thesis was over with before he even presents the radical translation scenario. That thought experiment is but an illustration. The real argument begins with Quine's commitment to science, as I stressed at the beginning of the present chapter. Empiricism and naturalism are themselves findings of science. Empiricism implies linguistic behaviorism, and naturalism implies holism. Together, behaviorism and holism imply the indeterminacy of translation.

§16

The final section of this chapter is spent guarding against anticipated objections to the indeterminacy thesis. We will not be concerned with any of these specific objections. Instead, in the next chapter, we will examine and evaluate other objections that appeared after the publication of *Word & Object*.

CHAPTER III

ASSESSING COMMON CRITICISMS

Now that we have established a basis for interpreting Quine's indeterminacy thesis, we can begin to assess criticisms. We shall begin by analyzing some common objections and attempting to employ our interpretation of indeterminacy in the resolution of these problems. Then, we shall examine two cases where confusions surrounding the under-determination of theory by data have affected arguments against indeterminacy. Finally, we will turn to an argument by John Searle, which attempts to defend our intuitive conceptions about meaning and reference from Quine's pernicious indeterminacy.

Four Widespread Criticisms

Roger Gibson provides an account of "some of the more widespread criticisms" (Gibson 1998, p. 28) of Quine's indeterminacy thesis. Gibson lists four such criticisms as follows:

(a) The indeterminacy thesis is not proven deductively.

(b) Linguistics is under-determined, but not indeterminate.

(c) The indeterminacy thesis is unintelligible or self-refuting.

(d) Actual translation has more evidence to go on than radical translation.

Let us see how our reading of *Word & Object* helps us to explain why these objections rest on misunderstandings of Quine.

The indeterminacy thesis is not proven deductively.

This particular objection may very well be conceded to be true, but it doesn't affect Quine's argument. The thought experiment of radical translation was never intended to serve as a deductive proof of indeterminacy. It is, after all, only a thought experiment. In the beginning of Chapter 2 of *Word & Object*, Quine says that he will "try to make the point plausible" (p. 27), which would be quite a strange choice of words for someone attempting to provide a deductive proof. In his later writings, Quine began referring to his indeterminacy thesis as a "conjecture" (Quine 2000, p. 419). He even explicitly contrasts indeterminacy of translation with inscrutability of reference, which he says can be so easily proven as to be trivial (Quine 1992, p. 50). So Quine's arguments for the indeterminacy of translation should not be read as if they were providing an absolute proof the thesis.

Linguistics is under-determined, but not indeterminate.

Some critics grant that science is under-determined by all possible evidence, and since linguistics is a part of our overall scientific theory, then it too shares in under-determination. But these critics are not willing to grant that there is some kind of unique indeterminacy that goes beyond the usual under-determination. Now, notice that these critics have at least avoided the mistake of confusing under-determination with indeterminacy. But they have failed to grasp the background argument for indeterminacy, which has been detailed over the past two chapters. As mentioned before, it all starts with taking science seriously.

It is a finding of science, according to Quine, that empiricism is true. Human beings only have five sensory modalities which serve as the ultimate source of all of our knowledge of the world. Thus all that we know has been observed or inferred based on what has been observed. Applying this point to language, we naturally come to the conclusion of linguistic behaviorism: all facts about language must be learned through observable behavior. Additionally, throughout

his various writings, including the first chapter of *Word & Object*, Quine has advocated his own understanding of naturalism, which Quine also views as a finding of science (Hylton 2014, p. 150ff). Naturalism, again, is in part the idea that empirical science is the best path to knowledge thus far devised. There is no *a priori* standpoint that the philosopher occupies from which she can evaluate, free from any theoretical biases or previously adopted conceptual schemes, our system of knowledge. There is no sense to or hope for the Cartesian quest for a certain foundation for human knowledge. Thus naturalism naturally leads us to accept holism: the idea that our knowledge is a unified "web" of interdependent beliefs. Certain beliefs are on the edges of the web and can be directly tested in experience (such as those represented in observation sentences), while others are more central (such as beliefs about logic, mathematics, or highly theoretical physics) and can only be tested via indirect connections to the beliefs on the edge of the web. When we combine behaviorism and holism, the natural implication is the indeterminacy of translation. Behaviorism, again, implies that all our linguistic knowledge depends on observable events. Holism implies that there are multiple ways of constructing our "web" of knowledge that are equally consistent with our observations. Thus, for linguistic meaning that is far removed from experience, there simply is no fact of the matter that determines it. This is an ontological point. There is no physical (i.e., behavioral) state of affairs that could possibly ground the meaning of such statements. This is in contrast to physical theory, which is under-determined, but nonetheless there is some physical state of affairs which determines the facts of physics. Under-determination of physical theory is epistemological. Indeterminacy of translation is ontological.

The indeterminacy thesis is unintelligible or self-refuting.

This objection attempts to identify a contradiction in Quine's own presentation of the indeterminacy of translation. As we just saw in the previous response, the point that Quine wishes to make with the indeterminacy thesis is ontological. There are no such entities as meanings (or propositions, etc.). What sense can there be, then, to saying that we can create two translation

manuals of the native's language that assign different, incompatible meanings to the respective translations of a certain native sentence? What does it mean to say that the translations are unlike in meaning if, as Quine argues, there is no such thing as sameness of meaning?

This is a serious objection, and it is one which Quine appears to have concerned himself with while he was writing *Word & Object*, as we saw earlier in our discussion of §7. As we noted there, Quine does eventually find, within *Word & Object*, a formulation for the indeterminacy thesis that doesn't rely on appeals to the notion of meaning at all. Additionally, in one of the many later writings where Quine revisits the concept of indeterminacy, he finds another way of explicating the issue which appeals strictly to behavioral terms. In his 1992 book *Pursuit of Truth*, Quine says that indeterminacy can be understood as implying the existence of two translation manuals, equally correct (i.e., the use of either manual results in fluent dialogue), cannot be used in alternation on a sentence-by-sentence basis without resulting in incoherent dialogue (i.e., verbal behavior that causes confused reactions in the native speakers).

This objection, although relatively easy to avoid, does highlight a point that is worth discussing further. Quine, in many of his works, makes casual appeal to notions that he has made explicit arguments against, such as meaning, propositions, properties, attributes, or the propositional attitudes and other mentalistic discourse. It is important to recognize that in most cases Quine employs these concepts for a heuristic purpose, similar, perhaps, to Wittgenstein's ladder. Quine uses problematic notions to highlight problems contained in them, and then we can cast them aside. In some cases, however, such as those involving reference to propositional attitudes, Quine even recognizes that such talk is absolutely indispensable, not only in our personal lives, but also in the social sciences (Quine 1992, p. 72-3). Quine will sometimes invoke the notion of meaning even within the same chapter that argues against it, but it should be understood that such references do not in themselves implicate Quine to an ontological commitment to the existence of meanings as entities. In fact, the most important point of *Word &*

Object is his proposed system of the regimentation of the language of science, in which we can rephrase sentences that casually appeal to problematic notions such that they are no longer implicit in our ontology. But that system is not our present concern.

Actual translation has more evidence to go on than radical translation.

This is another objection which may be conceded to be true, to a certain extent at least. When translating sentences of more familiar languages, such as French, German, or Chinese, there is another avenue of behavioral evidence available to the translator: the established tradition of translation made possible by a history of cultural interaction. Quine acknowledges this point, even adding that the "resemblance of cognate word forms" (p. 28) between languages within the same language family aids in determining translations. But this objection fails to recognize the scope of the indeterminacy of translation. As Gibson notes, we could, in principle, devise an alternate system of analytical hypotheses for translation between French and English, for example, that would still be consistent with the behavioral evidence. In his later works, Quine even points out that indeterminacy infects one's own native language: "For given the rival manuals of translation between Jungle and English, we can translate English perversely into English by translating it into Jungle by one manual and then back by the other" (Quine 1992, p. 48).

Confusions Due to Under-Determination

As has been mentioned before, some readers have interpreted the indeterminacy of translation as just a special case of the under-determination of theory by data. Others have recognized that Quine intends to present indeterminacy as something additional to our ordinary notion of under-determination, but they cannot recognize in Quine's writings any argument for this thesis that isn't solely based on under-determination. There critics are then left wondering why Quine apparently thinks that because linguistics is under-determined, just like the rest of our

global scientific theory, then linguistics exhibits some additional kind of indeterminacy. If these critics are right, then it seems hard to disagree with them.

Michael Dummett, for example, has advanced just such a view: "All I claim is that the under-determination of theory is the sole positive reason Quine has given for believing that indeterminacy of translation actually occurs, and that it is not in fact a cogent reason." (Dummett 1974, p. 416). Charles Chihara, likewise, has succumbed to this confusion, despite avoiding the tempting confusion of indeterminacy with inscrutability:

> Many philosophers have thought that Quine's reasons for espousing the indeterminacy thesis are to be found in his discussions of the 'Gavagai' example. But Quine tells us that the 'real ground of the doctrine is very different, broader, and deeper' [(Quine 1970a, p. 178)]. The real ground, evidently, is to be found in the fact (if it is a fact) that one can have two physical theories P and P* that are incompatible with each other and yet compatible with all possible data. (Chihara 1987, p. 44)

Chihara goes on to search for additional considerations beyond a mere argument from under-determination to indeterminacy, rightly recognizing that such an argument displays "an enormous gap in… reasoning" (Chihara, p. 45). He analyzes Quine's remarks on the nature of evidence, which puts him in the right direction. However, he gets sidetracked with considerations on confirmation and falsification. These issues are too specific, however, for Quine's background argument for indeterminacy, as we have seen, proceeds much more generally. It is Quine's understanding of the nature of science as a whole and the scientific findings of naturalism and empiricism that bear the weight of Quine's argument.

It is worth investigating, at this point, what accounts for this trend of confusion over Quine's argument for indeterminacy. What led these philosophers to think that a philosopher as distinguished as Quine would commit himself to such an obviously weak argument? The answer,

surprisingly, appears to be Quine himself. Since misunderstandings of Quine's arguments were quite common after the publication of *Word & Object*, Quine decided to revisit the issue of indeterminacy in an article titled "On the Reasons for the Indeterminacy of Translation" (Quine 1970a). (We saw above that Chihara quoted this article in his essay.) In this essay, Quine considers the scope of under-determination of physical theory, and then applies this notion to the radical translation scenario. Just as it is within our own case, the native's chosen physical theory is under-determined. This under-determination "recurs in second intension" (Quine 1970a, p. 179) when we are attempting to translate the native's physical theory into our own language. All we have to go on are the translations of the native's observation sentences, and then we must construct the remaining physical theory by projecting various analytical hypotheses. So the theory that the linguist is attempting to translate is under-determined by the possible observations of the native, and then our translation itself is likewise under-determined by the possible observations of the native's utterances. This compounded effect of under-determination, it seems, is somehow supposed to result in the indeterminacy of the translation of the native's physical theory.

Unfortunately, Quine does not make his point much clearer in this essay. He does go out of his way a couple of times to emphasize the point that "the indeterminacy of translation is not just an instance of the empirically underdetermined character of physics", that it is "additional" (Quine 1970a, p. 180). He goes on to say:

> Where physical theories *A* and *B* are both compatible with all possible data, we might adopt *A* for ourselves and still remain free to translate the foreigner as believing *A* or as believing *B*… The question whether… the foreigner *really* believes *A* or believes rather *B*, is a question whose very significance I would put in doubt. This is what I am getting at in arguing the indeterminacy of translation. (Quine 1970a, p. 180-181)

Despite Quine's efforts, there still seems to be a gap in reasoning here. The gap is filled in, I suggest, by Quine's naturalism, which is left unmentioned in this essay. The reason that we are able to definitively assign one theory to ourselves, but not to the native, is because we are always

operating from within one theory, one conceptual scheme, or another. When operating from within our own home language, we are taking seriously the conceptual scheme that comes along with it. This is how we can say that we know what we mean when we utter some sentence of our own theoretical physics. The same can be said of the native. But when it comes to bridging the gap between the two conceptual schemes, there is no basis for inter-theoretical meaning (beyond stimulus meaning, that is). Similar to how there is no sense in asking what entity in our contemporary physics is identical to, say, phlogiston or the ether, likewise there is no sense in asking if a certain sentence from our physical theory is identical in meaning to a sentence from the native's physical theory. There just is no fact of the matter, since the concepts originate from wholly alien conceptual schemes.

The proposed argument from under-determination to indeterminacy thus seems insufficient without supplementary considerations from portions of what I have referred to as Quine's background argument. Thus it seems more effective to simply proceed from that argument to begin with, and cast aside the under-determination argument. It only invites more confusion than it is worth. In any case, as Peter Hylton has pointed out, the argument from under-determination seems to have fallen into disfavor for Quine in his later writings, so it would be best not to regard this as his primary argument for indeterminacy (Hylton, 2007, p. 218).

Searle and "Common Sense" Confusions

Finally, we turn to John Searle's criticisms of Quine's indeterminacy thesis as they are presented in his 1987 paper "Indeterminacy, Empiricism, and the First Person". Searle was educated at Oxford, and it is no mere coincidence that his work often bears a strong resemblance to that of the so-called "ordinary language" philosophers. Searle's work, in many cases, supports positions that he takes to exemplify "common sense" or intuitively obvious views. Searle's criticism of indeterminacy is just such a case. First, we shall identify some basic

misinterpretations by Searle. Then we will lay out Searle's main arguments, and show how it fails to refute Quine's position.

Searle makes a few errors in his essay that are relatively independent of his main argument, but are worth correcting nonetheless. First, Searle incorrectly equates Quine's "linguistic behaviorism" with the psychological behaviorism of B.F. Skinner. Thus, Searle believes that Quine's entire thesis was refuted the year before *Word & Object* was even published, in Chomsky's well-known review of *Verbal Behavior* (Skinner 1957). As we saw in our discussion of §2, however, Quine's behaviorism should not be identified with that of Skinner. Quine's behaviorism is purely linguistic, and does not necessarily have any implications for psychology. Curiously, Searle even acknowledges Quine's clarification that his brand of behaviorism does not necessarily repudiate all forms of mental entities, and that it is only intended to apply to accounts of linguistic meaning and language learning. Yet he still does not recognize the difference between Quine and Skinner. But all of this is really beside the point anyway, since Searle will ultimately argue that Quine's behaviorism is a *reductio ad absurdum* of itself, and we need not depend on Chomsky.

Searle also appears to exhibit a fundamental misunderstanding of the indeterminacy thesis itself. He formulates the thesis as saying that "where questions of translation and, therefore, of meaning are concerned, there is no such thing as getting it right or wrong… because there is no fact of the matter to be right or wrong about" (Searle 1987, p. 127). This is a clear misrepresentation of the indeterminacy thesis. What indeterminacy implies is not that there is "no such thing as getting it right or wrong" when it comes to translation. Rather, indeterminacy of translation implies that there is *at least* more than one way of correctly translating a language. Indeterminacy only denies that there is a *uniquely correct* translation. There are in fact *many* ways of getting translation either right or wrong. Searle's remarks here seems to suggest that indeterminacy implies that translation is impossible. But this is far from the case.

Additionally, Searle appears to conceive of the inscrutability of reference and ontological relativity as two distinct theses. In fact, he thinks that ontological relativity is best seen as "an unsuccessful maneuver to rescue [Quine's] theory from the apparently absurd consequences of [indeterminacy of translation and inscrutability of reference]" (Searle 1987, p. 127). However, the idea that inscrutability and ontological relativity are two distinct theses is one that Quine has disputed (Quine 1986, p. 459). Additionally, Searle has identified the inscrutability of reference as the "crux of the indeterminacy argument" (Searle 1987, p. 132). But this is mistaken. Quine argues that it is the indeterminacy of translation that is the "serious and controversial thesis" (Quine 1992, p. 50). Additionally, as we saw in our response to the first objection of this chapter, Quine thought of inscrutability of reference as trivial, and capable of easy proof. The simplest such proof is Quine's example of proxy functions which invoke what he calls "cosmic complements" (Quine 1995, p. 71-73). These proxy functions are one-to-one mappings which reinterpret all references to physical objects as references to cosmic complements of those physical objects (i.e., everything in the universe that is *not* the object originally referred to). Quine notes that verbal behavior and even truth functions would all be preserved under this reinterpretation. Even though Quine finds this idea trivial, Searle seems to find it quite threatening to our understanding of language.

Now, we can proceed to Searle's main argument. The basic line of his argument is that by simply entertaining Quine's assumptions and following through with logical implications of the radical translation thought experiment, we find that the consequences are so absurd that Quine's entire position must be rejected. Searle argues that it is in fact Quine's behavioristic assumption that is solely responsible for indeterminacy and inscrutability, and hence also for the absurd consequences of these doctrines. On this point, my account would grant that he is partially right. Behaviorism arguably may be the most important of the premises in what I have identified as the background argument for indeterminacy. But it must also be combined with holism to render the

conclusion plausible, and we must also reflect on Quine's naturalism in order to fully appreciate the coherence of the indeterminacy thesis. However, Searle also makes the mistake of identifying behaviorism as a mere *assumption* of Quine's, whereas my account suggests that there is in fact an argument for behaviorism implicit in Quine's writings leading up to and including the first chapter of *Word & Object*.

According to Searle, "[i]f behaviorism were true, then certain distinctions known independently to be valid would be lost" (Searle 1987, p. 124). Searle cites as an example the "distinction between [a speaker's] meaning rabbit and his meaning rabbit stage or undetached rabbit part" (Searle 1987, p. 124). Searle refers to this example as a distinction that "we all know" (Searle 1987, p. 124). Searle provides no explanation of how it is that we all know this distinction, but rather takes it for granted. Most curiously, Searle's use of the phrase 'known independently' is never explained, either. It is not at all clear from *what* we are supposed to be independent as we know these distinctions. Since a major aspect of Quine's position rests on his naturalism, which states that we are in fact *never* independent of some conceptual scheme, working theory, or theoretical standpoint, it is crucial that Searle be quite explicit in explaining what it is that he claiming when he says that we know these distinctions "independently". Otherwise he appears to be simply begging the question against Quine's naturalism.

As Searle reflects on the behavioristic mechanism of stimulus and response employed by Quine's field linguist, he finds it insufficient to explain our everyday semantic abilities: "…if all there were to meaning were patterns of stimulus and response, then it would be impossible to discriminate meanings, which are in fact discriminable. That is the reductio ad absurdum" (Searle 1987, p. 125). Again, Searle does not offer any explanation on how it is that meanings are discriminable, which is rather a shame. Given Quine's policy of "no entity without identity", some specific insight on how it is that we discriminate meanings could meet Quine's challenge, at which point he would have to admit meanings as entities, and the entire problem of indeterminacy

would simply vanish. Rather, Searle appears to be satisfied that our common sense intuition that we can individuate meanings as absolute matters of fact will vindicate his position. But Quine is discussing a scientific approach to the study of language. The history of science is riddled with "common sense" ideas that have turned out to be deeply flawed. Intuition alone is not enough.

Searle illustrates his *reductio* again in a slightly different form. First, he defines behaviorism as follows: "The objective reality of meaning consists entirely of correlations between external stimuli and dispositions to verbal behavior" (Searle 1987, p. 126). He goes on to say, then, that "[i]f behaviorism were correct, it would have to be correct for us as speakers of English as well as for speakers of Gavagai-talk" (Searle 1987, p. 126). At this point, Searle introduces the "first person case". We know in our own cases what we mean when we say 'rabbit', as opposed to 'rabbit-stage', or 'undetached rabbit part'. If this is true for us, then it must also be true for the natives. Therefore there must be some fact of the matter. But behaviorism implies that there is no such fact of the matter. Thus, behaviorism is false. And if behaviorism is false, then our background argument for indeterminacy clearly fails.

The "first person case" continues to be the primary focus of Searle's argument throughout the rest of the essay. He develops this approach further by focusing on the absurdity of the consequences of inscrutability. The primary tension is this: we know, in our cases, what we mean when use terms such as 'rabbit'. We know what we are referring to, and it is a plain fact. But if inscrutability is true, the reference is not even fixed in one's own case. There is no real difference between one's meaning rabbit, rabbit-stage, or undetached rabbit part when one uses the term 'rabbit'. The absurdity of this conclusion, says Searle, is that if it is true, then there is no way that anyone could have possibly understood the previous sentence. If inscrutability is true, then there is no coherent way of communicating the thesis:

> If the indeterminacy thesis were really true, we would not even be able to understand its formulation; for when we were told there was no 'fact of the matter' about the

> correctness of the translation between rabbit and rabbit stage, we would not have been able to hear any (objectively real) difference between the two English expressions to start with. (Searle 1987, p. 131)

Searle recognizes the response that Quine has given to this objection. Quine argued by way of analogy with the theory of relativity:

> It is meaningless to ask whether, in general, our terms “rabbit,” “rabbit part,” “number,” etc., really refer respectively to rabbits, rabbit parts, numbers, etc., rather than to some ingeniously permuted denotations. It is meaningless to ask this absolutely; we can meaningfully ask it only relative to some background language. When we ask, “Does ‘rabbit’ really refer to rabbits?” someone can counter with the question: “Refer to rabbits in what sense of ‘rabbits’?” thus launching a regress; and we need the background language to regress into. The background language gives the query sense, if only relative sense; sense relative in turn to it, this background language. Querying reference in any more absolute way would be like asking absolute position, or absolute velocity, rather than position or velocity relative to a given frame of reference. (Quine 1969a, pg. 48-49)

So, just as there is no empirical sense in casting about for absolute position in space, likewise there is no empirical sense in asking what the meaning of a word or sentence is independent of any particular language or theory. That is to say, the notion of language-transcendent meaning is itself meaningless. All meaning is relative to the language being utilized at the time. The same applies for questions of reference as well. Hence the term ‘ontological relativity’. Thus when we take ourselves to be referring to rabbits when we use the term ‘rabbits’, we are simply “acquiescing in our mother tongue and taking its words at face value” (Quine 1969a, p. 49).

Searle rejects this response, however, arguing that it merely “repeats the problem without solving it” (Searle 1987, p. 132). His objection is that this solution does nothing to affect the arbitrariness of our selection of which language to take at “face value”. This is the same problem, Searle argues, with the indeterminacy of translation. We can only arbitrarily select one translation manual over another, since both are equally compatible with all the possible empirical evidence. It is this arbitrariness, apparently, which is responsible for the absurdity of Quine’s thesis.

Searle constructs a thought experiment to illustrate his point. He imagines that he is driving with two French friends, Henri and Pierre. Searle sees a rabbit along the road and announces, "There's a rabbit". Henri and Pierre are not familiar with the English term 'rabbit'. They each attempt to translate this term into their own language. Henri settles on *stade de lapin*, while Pierre chooses *parti non-détachée d'un lapin*. Searle asserts, first, that based on certain assumptions about what the phrases mean in French, these are obviously bad translations. He asserts that it is "just a plain fact about me that when I said 'rabbit,' I did not mean *stade de lapin* or *parti non-détachée d'un lapin*" (Searle 1987, p. 133). If those assumptions about the meaning of those French phrases are wrong, however, then

> Henri and Pierre are just right. That is, if, for example, Henri means by *stade de lapin* what I mean by *lapin*, then he understands me perfectly; he simply has an eccentric way of expressing this understanding. The important thing to notice is that, in either case, whether they are right about my original meaning or I am right in thinking that they are wrong, there is a plain fact of the matter to be right or wrong about. (Searle 1987, p. 134)

Once again, Searle makes several "common sense" assertions about linguistic meaning without much by way of support for these assertions. Furthermore, Searle is so incapable of separating himself from his intuitive conception of meaning that he cannot even consistently formulate his own thought experiment. If we actually grant for the sake of argument that Searle is wrong about the meaning of Henri and Pierre's chosen translations, then it makes no sense to turn around and say that "if… Henri means by *stade de lapin* what I mean by *lapin*, then he understands me perfectly" (Searle 1987, p. 134). This is simply to once again grant the original assumptions about the meanings of these French phrases. There is no basis for supposing that these phrases are in fact synonymous without those assumptions about French meaning. Ironically, Searle's inability to coherently present his thought experiment here actually illustrates the relativity of meaning and reference quite well.

Searle then returns to the analogy with relativity theory, and enlists the aid of Henri and Pierre once more. While they are again out driving, Henri estimates that the car is driving at 60 miles an hour, while Pierre estimates that they are driving at 5 miles an hour. Resolving this disagreement requires recognizing that Henri was using the frame of reference of the road, while Pierre was using the frame of reference of a truck that they were passing. Thus their estimates were actually quite consistent, once the background assumptions have been identified. Searle accepts this kind of relativity, but he does not see the analogy successfully carrying over into semantics: "…are they analogously both right about the translation of 'rabbit' once the coordinate systems have been identified? Is it a case of moving at different semantic speeds relative to different linguistic coordinate systems? It seems to me that these absurdities are just as absurd when relativized" (Searle 1987, p. 134).

Why, precisely, does Searle feel that the absurdity persists? For two reasons: first, he continues to maintain that "the problem we are trying to deal with is that we know independently that both of their translation manuals are just plain wrong" (Searle 1987, p. 135). Once again, an explanation of how it is that we know this, and in what sense this knowledge is "independent", is not given. Second, Searle thinks that the analogy breaks down because meaning is not relative to language in the same way that motion or position is relative to a frame of reference or coordinate system:

> In physics the position and motion of a body consist entirely in its relations to some coordinate system; but there is more to meaning than just the relations that a word has to the language of which it is a part; otherwise the question of translation could never arise in the first place. We can't detach the specific motion or position of an object from a reference to a specific coordinate system and translate it into another system in the way we can detach a specific meaning from a specific linguistic system and find an expression that has that very meaning in another linguistic system. (Searle 1987, p. 135)

The last sentence of the above quotation is a telling one, for it reveals that Searle is not so much arguing against indeterminacy as much as he is simply repeatedly asserting, in various

paraphrases, that the indeterminacy of translation is false. To say that we can “detach a specific meaning from a specific linguistic system and find an expression that has that very meaning in another linguistic system” is just to admit meanings as language-transcendent entities within our ontology. But this is merely the denial of the conclusion of Quine’s argument. Other than Searle’s consistent appeals to common sense, “independent” knowledge of one’s own meaning, he has given no argumentative support for the conclusion that the indeterminacy thesis is false. Rather, it seems that Searle’s examples *depend* on the falsity of indeterminacy, rather than attempting to support it.

If Searle could be more specific about how exactly we detach these meanings and find synonymous phrases in other language, or about what it is that we are doing when we “know in our own case” what we mean by our words, or about what it means to know such things “independently”, then his argument might actually have some force. Unfortunately, the only further details that Searle offers is that “when we understand someone else or ourselves, what we require—among other things—is a knowledge of intentional contents” (Searle 1987, p. 146). Searle does not tell us what he means by this, either, other than that it is *not* equivalent to a behaviorist account of meaning. Searle’s argument, then, appears to be not much more than a tautological assertion: the indeterminacy of translation is false because it is false.

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