Perhaps the clearest and most explicit development of what appears to be a narrowly Humean theory of language acquisition in recent philosophy is that of Quine, in the introductory chapters to his *Word and Object*. If the Humean theory is roughly accurate, then a person's knowledge of language should be representable as a network of linguistic forms — let us say, to first approximation, sentences — associated with one another and, in part, associated to certain stimulus conditions. This formulation Quine presents as, I take it, a factual assertion. Thus he states that our "theories" — whether "deliberate", as chemistry, or "second nature", as "the immemorial doctrine of ordinary enduring middle-sized objects" — can each be characterized as "a fabric of sentences variously associated to one another and to non-verbal stimuli by the mechanism of conditioned response" (p. 11). Hence the whole of our knowledge (our total "theory", in this sense) can be characterized in these terms.

One difficulty that arises in interpreting such passages as these has to do with the relation between language and theory, where the latter term covers also general common-sense knowledge and belief. Quine's views about the interpenetration of theory and language are well known, but, even accepting them fully, one could not doubt that a person's language and his 'theory' are distinct systems. The point is too obvious to press, but it is, nevertheless, difficult to see how Quine distinguishes the two in his framework. In fact, throughout the discussion, he seems to use the terms interchangeably. For example, in Chapter 1, he discusses the learning of language in general terms, exemplifies it by an example from chemical theory leading up to the statement just quoted, then seemingly describes the "vast verbal structure" so constructed, the associative network that constitutes one's knowledge of science ("and indeed everything we ever say about the world"), as both the "body of theory" that one accepts and the language that one learns. Thus the discussion of how one constructs and uses a total theory of this sort concludes with the following statement:
Beneath the uniformity that unites us in communication there is a chaotic personal diversity of connections, and, for each of us, the connections continue to evolve. No two of us learn our language alike, nor, in a sense, does any finish learning it while he lives.

Since the comment merely summarizes the discussion of how the "single connected fabric" constituting our total theory is acquired (the latter discussion itself having been introduced to exemplify language learning), it seems that Quine must be proposing that a language, too, is "a fabric of sentences variously connected to one another and to non-verbal stimuli by the mechanism of conditioned response". Other parts of his exposition reinforce the conclusion that this is what is intended, as we shall see in a moment. Nevertheless, interpretation of Quine's remarks is made difficult at points because of his tendency to use the terms 'language' and 'theory' interchangeably, though obviously he must be presupposing a fundamental difference between the two – he is, for example, surely not proposing that two monolingual speakers of the same language cannot disagree on questions of belief, or that controversy over facts is necessarily as irrational as an argument between a monolingual speaker of English and a monolingual speaker of German.

Elsewhere, Quine states that he is considering a language as a "complex of present dispositions to verbal behavior, in which speakers of the same language have performe come to resemble one another" (p. 27). Thus if a language is a network of sentences associated to one another and to external stimuli by the mechanism of conditioned response, then it follows that a person's disposition to verbal behavior can be characterized in terms of such a network. This factual assumption is far from obvious. I return to other aspects of this concept of 'language' below.

How is knowledge of such a language acquired? Evidently, a Humean theory will acquire substance only if such notions as 'similarity' are characterized in some way. Quine therefore postulates a prelinguistic (and presumably innate) "quality space" with a built-in distance measure (p. 83-4). Evidently, the structure of this space will determine the content of the theory of learning. For example, one could easily construct a theory of innate ideas of a rather classical sort in terms of a prelinguistic quality space with a build-in distance measure. Quine would, apparently, accept a very strong version of a theory of innate ideas as compatible with his framework. Thus he considers the possibility that "a red ball, a yellow ball, and a green ball are less distant from one another in... the child's... quality space than from a red kerchief". It is difficult to see how this differs from the assumption that 'ball' is an innate idea, if we admit the same possibilities along other 'dimensions' (particularly, if we allow these dimensions to be fairly abstract). In this respect, then, Quine seems to depart quite radically from the leading ideas that guided empiricist theory and to permit just about anything imaginable, so far as 'learning' of concepts is concerned. In particular, consider the fact that a speaker of English has acquired the concept 'sentence of English'. Suppose that we were to postulate an innate quality space with a structure so abstract that any two sentences of English are nearer to one another in terms of the postulated distance measure than a sentence of English and any sentence of another language. Then a learner could acquire the concept 'sentence of English' – he could, in other words, know that the language to which he is exposed is English and 'generalize' to any other sentence of English – from an exposure to one sentence. The same is true if we mean by 'sentence of English' a pairing of a certain phonetic and semantic interpretation. We could, once again, construct a quality space sufficiently abstract so that the infinite set of English sentences could be 'learned' from exposure to one sentence, by an organism equipped with this quality space.

The handful of examples and references that Quine gives suggests that he has something much narrower in mind, however; perhaps, a restriction to dimensions which have some simple physical correlate such as hue or brightness, with distance defined in terms of these physical correlates. If so, we have a very strong and quite specific version of a doctrine of innate ideas which now can be faced with empirical evidence.

It might be thought that Quine adds empirical content to his account by his insistence that "the child's early learning of a verbal response depends on society's reinforcement of the response in association with the stimulations that merit the response..." (p. 82) and his general insistence throughout that learning is based on reinforcement. But, unfortunately, Quine's concept of 'reinforcement' is reduced to near vacuity. For example, he is willing to accept the possibility that "society's reinforcement consists in no more than corroborative usage, whose resemblance to the child's effort is the sole reward" (p. 82-3). To say that learning requires reinforcement, then, comes very close to saying
that learning cannot proceed without data. As Quine notes, his approach is "cogenial... to Skinner's scheme, for... [Skinner]... does not enumerate the rewards". The remark is correct, but it should also be added that "Skinner's scheme" is almost totally empty, in fact, if anything, even less substantive than Quine's version of it, since Skinner, as distinct from Quine, does not even require that reinforcing stimuli impinge on the organism — it is sufficient that they be imagined, hoped for, etc. In general, the invoking of 'reinforcement' serves only a ritualistic function in such discussions as these, and one can safely disregard it in trying to determine the substantive content of what is being proposed.

However, Quine returns to a classical empiricist conception of a non-vacuous sort in his assumptions about how language is learned. Consistent with his view of language as a network of sentences, he enumerates three possible mechanisms by which sentences can be learned — i.e., by which knowledge of language can be acquired (p. 9f.). First, sentences can be learned by "direct conditioning" to appropriate non-verbal stimulations, that is, by repeated pairing of a stimulation and a sentence under appropriate conditions; second, by association of sentences with sentences (let us put aside the objection that in both cases, the associations should soon disappear, through extinction, under normal circumstances); third, new sentences can be produced by "analogue synthesis". The third method at first seems to offer an escape to vacuity, once again. Thus if the first sentence of this paper is derivable by analogical synthesis from "the sky is blue" (both involve subject and predicate, are generated with their interpretations by the rules of English grammar, and share many other properties), then it is no doubt true that language can be learned by 'analogue synthesis', by 'generalization' along a dimension of the abstract sort suggested above (cf. p. 55). But it seems clear that Quine has nothing of this sort in mind. The one example that he gives is a case of substitution of one word for a similar one ('hand', 'foot') in a fixed context. And he seems to imply that the process of analogical synthesis is theoretically dispensable, simply serving to speed matters up (see p. 9). Therefore, we can perhaps conform to his intentions by totally disregarding this process, and considering the knowledge attained by a long-lived adult using only the first two methods instead of the knowledge attained by a young child who has used all three (there being nothing that can be said about the latter case until the notion 'analogue synthesis' is given some content). Noting further that a child of nine and a man of ninety share knowledge of language in fundamental respects — each can understand and use appropriately an astronomical number of sentences, for example — it would seem, further, that little is lost in omitting 'analogue synthesis' from consideration entirely, even for the young child. Assuming that this interpretation of Quine's remarks is correct, we derive support for the conclusion that he regards a language as a finite network of associated sentences, some associated also to stimuli, since this is just the structure that would arise from the two postulated mechanisms of language learning with substantive content.

Against this interpretation of Quine's remarks on language we can bring the fact that it is inconsistent with a truism that he of course accepts, namely, that a language is an infinite set of sentences (with intrinsic meanings; cf., e.g., p. 71). A network derived by the postulated mechanisms must be finite; it can, in fact, contain only the sentences to which a person has been exposed (repeatedly, and under similar circumstances). If we return to the definition of 'language' as a "complex of dispositions to verbal behavior", we reach a similar conclusion, at least if this notion is intended to have empirical content. Presumably, a complex of dispositions is a structure that can be represented as a set of probabilities for utterances in certain definable circumstances or 'situations'. But it must be recognized that the notion 'probability of a sentence' is an entirely useless one, under any known interpretation of this term. On empirical grounds, the probability of my producing some given sentence of English — say, this sentence, or the sentence "birds fly" or "Tuesday follows Monday", or whatever — is indistinguishable from the probability of my producing a given sentence of Japanese. Introduction of the notion of 'probability relative to a situation' changes nothing, at least if 'situations' are characterized on any known objective grounds (we can, of course, raise the conditional probability of any sentence as high as we like, say to unity, relative to 'situations' specified on ad hoc, invented grounds). Hence if a language is a totality of speech dispositions (in some empirically significant sense of this notion), then my language either does not include the sentences just cited as examples, or it includes all of Japanese. In fact if the "complex of dispositions" is determined on grounds of empirical observation, then only a few conventional greetings, clichés, and so on, have much chance of being as-
sociated to the complex defining the language, since few other sentences are likely to have a non-null relative frequency, in the technical sense, in any reasonable corpus or set of observations—we would, for example, expect the attested frequency of any given sentence to decrease without limit as a corpus increases, under any but the most artificial conditions. One might imagine other ways of assigning probabilities to sentences on empirical grounds, but none, so far as I can see, that avoid these difficulties. Hence if a language is a complex of dispositions to respond under a normal set of circumstances, it would be not only finite (unless it included all languages) but also extremely small.

Adding to the confusion is the fact that Quine appears to vacillate somewhat in his use of the notion "speech dispositions". Thus he formulates the problem of "indeterminacy of translation" as resulting from the fact that "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). As just noted, if we take the "totality of speech dispositions" of an individual to be characterized by probability distributions for utterances under detectable stimulus conditions, then the thesis quoted is true, near-vacuously, since except for a trivial set, all such probabilities will be empirically indistinguishable on empirical grounds, within or outside of the language. On the other hand, if we interpret the notions 'disposition' and 'situation' more loosely, it might be argued that the problem is really quite different, that there will be so few similarities among individuals in what they are inclined to say in given circumstances that no manual of translation can be set up at all, compatible with such inclinations. Actually, Quine avoids these problems, in his exposition, by shifting his ground from "totality of speech dispositions" to "stimulus meanings", that is, dispositions to "assert or dissent" in a situation determined by one narrowly circumscribed experiment. He even goes so far as to say that this arbitrarily selected experiment provides all of the evidence that is available, in principle, to the linguist (equivalently, to the language learner—p. 39). Clearly, however, a person's total "disposition to verbal response" under arbitrary stimulus conditions is not the same as his "dispositions to be prompted to assert or to dissent from the sentence" under the particular conditions of the *Gedankenexperiment* that Quine outlines. One might argue that by arbitrarily limiting the "totality of evidence", Quine ir-

relevantly establishes the thesis that alternative theories (manuals of translation) exist compatible with all of the evidence (though the general thesis of indeterminacy of translation is nevertheless certainly true, in a sense to which we return in a moment). But my point here is only that this kind of vacillation makes it still more difficult to determine what Quine means by 'disposition' or 'language'.

It is easy to imagine a way out of the difficulties posed by the implied finiteness of language and knowledge (or near emptiness, if the notion of 'disposition' is taken very seriously). Thus one might assume that knowledge of a 'universal grammar', in the widest sense, is an innate property of the mind, and that this given system of rules and principles determines the form and meaning of infinitely many sentences (and the infinite scope of our knowledge and belief) from the minute experiential base that is actually available to us. I do not doubt that this approach is quite reasonable, but it then raises the empirical question of the nature of this universal, *a priori* system; and, of course, any philosophical conclusions that may be drawn will depend on the answers proposed for this question. Quine's attitude towards an approach of this sort is not easy to determine. It certainly seems inconsistent with his general point of view, specifically, with his claim that even our knowledge of logical truths is derived by conditioning mechanisms that associate certain pairs of sentences (cf., e.g., p. 11f.), so that our knowledge of logical relations must be representable as a finite network of interconnected sentences. (How we can distinguish logical connections from causal ones, or either type from sentences which happen to be paired by accident in our experience is unclear, just as it is unclear how either sort of knowledge can be applied, but it is pointless to pursue this issue in the light of the strangeness of the whole conception.) Elsewhere, however, Quine appears to take the view that truth-functional logic might provide a kind of 'universal grammar'. Thus he asserts (p. 13) that truth functions lend themselves to "radical translation" without "unverifiable analytical hypotheses", and hence can be learned directly from the available evidence. He gives no real argument for this beyond the statement, which appears quite irrelevant to the factual issue involved, that we can state truth conditions in terms of assert and dissent. The inference from what we can observe to a postulated underlying structure involving truth-functional connectives of course requires assumptions that go beyond
evidence—mutually incompatible alternatives consistent with the evidence can easily be constructed. Hence Quine's willingness to place these matters within the framework of radical translation perhaps indicates that he is willing to regard the system of truth-functional logic as available, independently of experience, as a basis for language-learning. If so, it seems quite arbitrary to accept this framework as innate schematism, and not to admit much else that can be imagined and described. In view of the unclarity of this matter, and the apparent inconsistency of the proposal just discussed with Quine's explicit characterization of 'theory' and 'language' and the mechanisms for acquiring them, I will put aside any further consideration of this topic.

We are left with the fact that Quine develops his explicit notion of 'language' and 'theory' within a narrowly conceived Humean framework (except for the possible intrusion of a rich system of innate ideas), and that he characterizes language learning ('learning of sentences') in a way consistent with this narrow interpretation, although the conclusion that a language (or theory) is a finite fabric of sentences, constructed pairwise by training, or a set of sentences with empirically detectable probabilities of being produced (hence a nearly empty set) is incompatible with various truisms to which Quine would certainly agree.

Quine relies on his empirical assumptions about the acquisition of knowledge and learning of language to support some of his major philosophical conclusions. One critical example will serve to illustrate. Fundamental to knowledge are certain "analytical hypotheses" that go beyond the evidence. A crucial point, for Quine, is that the correctness of analytical hypotheses, in the case of ordinary language and "common sense knowledge", is not "an objective matter" that one can be "right or wrong about". These analytical hypotheses "exceed anything implicit in any native's disposition to speech behavior". Therefore, when we use these analytical hypotheses (as we must, beyond the most trivial cases) in translating, in learning a language in the first place, or in interpreting what is said to us under normal circumstances, we "imbue our sense of linguistic analogy unverifiably to the native mind". The imputation is "unverifiable" in the sense that alternatives consistent with the data are conceivable; that is, it is 'strong verifiability' that is in question. "There can be no doubt that rival systems of analytical hypotheses can fit the totality of speech behavior to perfection, and can fit the totality of dispositions to speech behavior as well, and still specify mutually incompatible translations of countless sentences insusceptible of independent control" (p. 72). These remarks Quine puts forth as the thesis of "indeterminacy of translation".

To understand the thesis clearly it is necessary to bear in mind that Quine distinguishes sharply between the construction of analytical hypotheses on the basis of data and the postulation of "stimulus meanings of observation sentences" on the basis of data. The latter, he states, involves only uncertainty of the "normal inductive" kind (p. 68). The same is true, apparently, about the inductive inference involved in translation (similarly, 'learning' and understanding) of sentences containing truth-functional connectives. In these cases, induction leads us to "genuine hypotheses", which are to be sharply distinguished from the "analytical hypotheses" to which reference is made in the discussion of indeterminacy of translation. Hence Quine has in mind a distinction between 'normal induction', which involves no serious epistemological problem, and 'hypothesis formation' or 'theory construction', which does involve such a problem. Such a distinction can no doubt be made; its point, however, is less than obvious. It is not clear what Quine is presupposing when he passes over the "normal uncertainty of induction" as within the range of radical translation. If clarified, this would add more content to his empirical theory of acquisition of knowledge, by specification of the a priori properties on which 'normal induction' and the notions of relevant and sufficient evidence are based. It would then be necessary for him to justify the empirical assumption that the mind is natively endowed with the properties that permit 'normal induction' to 'genuine hypotheses', but not 'theory construction' with some perhaps narrowly constrained class of "analytical hypotheses".

To return to the thesis of indeterminacy of translation, there can surely be no doubt that Quine's statement about analytical hypotheses is true, though the question arises why it is important. It is, to be sure, undeniable that if a system of "analytical hypotheses" goes beyond evidence then it is possible to conceive alternatives compatible with the evidence, just as in the case of Quine's "genuine hypotheses" about stimulus meaning and truth-functional connectives. Thus the situation in the case of language, or "common sense knowledge", is, in this respect, no different from the case of physics. Accepting Quine's terms,
for the purpose of discussion, we might say that "just as we may meaningfully speak of the truth of a sentence only within the terms of some theory or conceptual scheme, so on the whole we may meaningfully speak of interlinguistic synonymy only within the terms of some particular system of analytical hypotheses" (p. 75). But, Quine answers:

To be thus reassured is to misjudge the parallel. In being able to speak of truth of a sentence only within a more inclusive theory, one is not much hampered; for one is always working with some comfortably inclusive theory, however tentative. ... In short, the parameters of truth stay conveniently fixed most of the time. Not so the analytical hypotheses that constitute the parameter of translation. We are always ready to wonder about the meaning of a foreigner's remark without reference to any one set of analytical hypotheses, indeed even in the absence of any; yet two sets of analytical hypotheses equally compatible with all linguistic behavior can give contrary answers, unless the remark is one of the limited sorts that can be translated without recourse to analytical hypotheses (p. 75-6).

Thus what distinguishes the case of physics from the case of language is that we are, for some reason, not permitted to have a "tentative theory" in the case of language (except for the 'normal inductive cases' mentioned above). There can be no fixed set of analytical hypotheses concerning language in general. We need a new set for each language (to be more precise, for each speaker of each language), there being nothing universal about the form of language. This problem, then, is one that faces the linguist, the child learning a language (or acquiring "common sense knowledge", given the interconnection between these processes), and the person who hears or reads something in his own language.4

To summarize, Quine supposes an innate quality space with a built-in distance measure that is, apparently, correlated to certain "obvious" physical properties. Furthermore, certain kinds of inductive operations (involving, perhaps, generalization in this quality space) are based on innate properties of the mind, as are also, perhaps, certain elements of truth-functional logic. Utilizing these properties, the child (or the linguist doing radical translation) can form certain genuine hypotheses, which might be wrong but are at least right-or-wrong, about stimulus meanings and truth-functional connectives. Beyond this, language-learning (acquisition of knowledge) is a matter of association of sentences to one another and to certain stimuli through conditioning, a process which results in a certain network of interconnected sentences, or, perhaps, a certain system of dispositions to respond. Language learning is a matter of "learning of sentences". It is impossible to make significant general statements about language or common-sense theories, and the child has no concept of language or of "common sense" available to him prior to his training. In this respect, the study of language is different from, let us say, physics. The physicist works within the framework of a tentative theory. The linguist cannot, nor can the psychologist studying a 'conceptual system' of the 'common sense' variety, just as the child can have no 'tentative theory' that guides him in learning from experience. Apart from difficulties of interpretation noted above, this is a relatively clear formulation of a classical empiricist doctrine. It involves, at every step, certain empirical assumptions which may or may not be true, but for which Quine does not seem to regard evidence as necessary.

Let us briefly consider these empirical assumptions. It is, first of all, not at all obvious that the potential concepts of ordinary language are characterizable in terms of simple physical dimensions of the kind Quine appears to presuppose or, conversely, that concepts characterizable in terms of such properties are potential concepts of ordinary language. It is a question of fact whether the concept 'house' is characterized, for a speaker of a natural language, as a 'region' in a space of physical dimensions, or, as Aristotle suggested, in terms of its function within a matrix of certain human needs and actions. The same is true of many other concepts, even the most primitive. Is a knife, to a child with normal experience, an object of such and such physical properties, or an object that is used for such and such purposes; or is it defined by an amalgam of such factors, say as an object meeting certain loose physical conditions that is used for a certain sort of cutting? How would we in fact identify an object looking exactly like a knife but used for some totally different purpose in some other culture? This is as much an empirical question as the question whether concepts characterized in terms of a region in a space of simple physical dimensions can be acquired in the way a child acquires his concepts. There is much to be said in this connection4, but it is enough to note, in the present context, that Quine's empirical assumptions may well be (I believe, certainly are) far too strong – more correctly, too strong in the wrong direction – and that they embody certain quite gratuitous factual assumptions.
Furthermore, consider the idea that 'similarity' in a sense appropriate for psychology, the kind of 'similarity' needed for an empirical theory of generalization, is definable in terms of distance in a certain space of physical dimensions. There is nothing obvious about this assumption. Two two-dimensional projections of a three-dimensional object may be 'similar', in the relevant sense, for an organism that has an appropriate concept of the three-dimensional object and its properties and an intuitive grasp of the principles of projection, although there is no dimension of the presupposed sort along which such stimulations match. We could easily design an automaton which would generalize from one such presentation to another, but not from one of these to a projection of some other three-dimensional object that matched the first in some simple physical dimension. We could, of course, describe the behaviour of this automaton in terms of a more abstract quantity space, just as we could describe an automaton that learned English from a single sentence in these terms — see p. 55, above. But this is only to say that it is an empirical problem, quite open for the time being, to determine what are the innate properties of mind that determine the nature of experience and the content of what comes to be known on the basis of (or independently of) this experience.

As far as "learning of sentences" is concerned, the entire notion seems almost unintelligible. Suppose that I describe a scene as rather like the view from my study window, except for the lake in the distance. Am I capable of this because I have learned the sentence: "This scene is rather like the view from my study window, except for the lake in the distance"? To say this would be as absurd as to suppose that I form this and other sentences of ordinary life by "analogical substitution", in any useful sense of this term. It seems hardly necessary to belabor the point, but surely it is clear that when we learn a language we are not "learning sentences" or acquiring a "behavioral repertoire" through training. Rather, we somehow develop certain principles (unconscious, of course) that determine the form and meaning of indefinitely many sentences. A description of knowledge of language (or "common sense knowledge") as an associative net constructed by conditioned response is in sharp conflict with whatever evidence we have about these matters. Similarly, the use of the term 'language' to refer to the "complex of present dispositions to verbal behavior, in which speakers of the same language have perforce come to resemble one another" seems rather perverse. Assuming even that the problems noted earlier (pp. 57–58) have been overcome, what point can there be to a definition of 'language' that makes language vary with mood, personality, brain lesions, eye injuries, gullibility, nutritional level, knowledge and belief, in the way in which "dispositions to respond" will vary under these and numerous other irrelevant conditions. What is involved here is a confusion to be found in much behaviorist discussion. To mention just one further example, consider Quine's remarks on synonymy in his 'Meaning in Linguistics'. Here he proposed that synonymy "roughly consists in approximate likeness in the situations which evoke two forms and approximate likeness in the effect on the hearer". If we take the terms "situation" and "effect" to refer to something that can be specified in terms of objective physical properties, as Quine would surely intend (say as involving observable stimulus conditions and observable behavior or emotional state, respectively), then the qualifications in the characterization of synonymy just quoted seem misplaced, for there is not even approximate likeness in the conditions that are likely to elicit (or to serve as occasion for) synonymous utterances, or in the effects of such utterances. Suppose that I see someone about to fall down the stairs. What would be the probability of my saying: "Watch out, you'll fall down the stairs!"? To say this would be as absurd as to suppose that I form this and other sentences of ordinary life by "analogical substitution", in any useful sense of this term. It seems hardly necessary to belabor the point, but surely it is clear that when we learn a language we are not "learning sentences" or acquiring a "behavioral repertoire" through training. Rather, we somehow develop certain principles (unconscious, of course) that determine the form and meaning of indefinitely many sentences. A description of knowledge of language (or "common sense knowledge") as an associative net constructed by conditioned response is in sharp conflict with whatever evidence we have about these matters. Similarly, the use of the term 'language' to refer to the "complex of present dispositions to verbal behavior, in which speakers of the same
work within the framework of a tentative theory, in studying language (or learning language, or translating, or interpreting what we hear), this is not possible, since it is impermissible to make general statements about language or, more generally, about our "common sense theories", and since innate properties of the mind can impose no conditions on language and theories.\footnote{This is simply classical empiricist doctrine – perhaps 'dogma' would, by now, be a more accurate term. It is difficult to see why this dogma should be taken more seriously than any other. It receives no support from what is known about language learning, or from human or comparative psychology. If it held true of humans, they would be unique in the animal world; and there is no evidence for this particular type of uniqueness. In general, it seems to me correct to say that insofar as empiricist doctrine has clear psychological content, it is in conflict with the not inconsiderable information that is now available. In any event, returning to the present theme, the particular assumptions that Quine makes about the mental processes and structures that provide the basis for human language learning are quite unwarranted, and have no special status among the many assumptions that can be imagined. They can be justified only by empirical evidence and argument. Philosophical conclusions based on these assumptions are no more persuasive than the evidence on which the assumptions rest; that is to say, for the present these conclusions are without force.} Interpreted in a psychological context, then, Quine's thesis of indeterminacy of radical translation amounts to an implausible and quite unsubstantiated empirical claim about what the mind brings to the problem of acquisition of language (or of knowledge in general) as an innate property. This claim seems to me of only historical interest. Interpreted in an epistemological context, as a claim about the possibility of developing linguistic theory, Quine's thesis is simply a version of familiar skeptical arguments which can be applied as well to physics, to the problem of veridical perception or, for that matter, to his "genuine hypotheses". It is quite certain that serious hypotheses concerning a native speaker's knowledge of English, or concerning the essential properties of human language – the innate schematism that determines what counts as linguistic data and what intellectual structures are developed on the basis of these data – will "go beyond the evidence". If they did not, they would be without interest. Since they go beyond mere summary of data, it will be the case that there are competing assumptions consistent with the data. But why should all of this occasion any surprise or concern?


REFERENCES

* Accepting, that is, the interpretation of his remarks that is discussed above.
* Elsewhere, Quine states that "the learning of these wholes (sentences) proceeds largely by an abstracting and assembling of parts" and that "as the child progresses, he tends increasingly to build his new sentences from parts" (p. 13). For consistency of interpretation, we must suppose that this refers to "analogical synthesis", since the three methods enumerated are intended to be exhaustive. If something else is intended, then the scheme again reduces to vacuity, until the innate basis for the "abstracting" and "assembling" is specified.
* It is interesting that Russell, in his Inquiry into Meaning and Truth, Allen and Unwin, London, 1940, with his concept of real logical form and of logical words as expressing a mental reality, does appear to presuppose a structure that would avoid at least these very obvious problems. But a discussion of Russell's quite intricate and interesting approach to these questions, though a useful undertaking, is impossible within the scope of this paper.
* The reasons for this choice would take us too far afield, into a much more general consideration of Quine's thesis, developed later in the book, about the scheme of discourse that one must use in "limning the true and ultimate structure of reality" (p. 221), and in describing "all traits of reality worthy of the name" (p. 228).
* Recall, again, that Quine is using the concept of "interlinguistic synonymy" as a device for discussing not only translation, but also learning of language in the first place and interpretation of what is said to him by one who knows a language.
* Cf. Philippa Foot, 'Goodness and Choice', Proceedings of the Aristotelian Society, Supplementary Volume 35 (1961) 45–60. She comments, correctly I am sure, that we would describe such objects as looking exactly like knives, but being something else. See also the remarks by J. Katz on such words as 'anesthetic' in his 'Semantic Theory and the Meaning of "Good"', Journal of Philosophy 64 (1967) 739–766.
* Consider, for example, the experimental evidence that has been produced purportedly showing differences between ayes and humans in ability to carry out cross-modal transfer. The difference is sometimes attributed to the 'linguistic tags' available to the human. (Cf. A. Moffett, and G. Ettlinger, 'Opposite Responding in Two Sense Modalities', Science, No. 3732 (8 July, 1966) 205–6; and G. Ettlinger, in Brain Mechanisms Underlying Speech and Language, ed. by F. L. Darley, Grune and Stratton, New York and London, 1967.) Another possibility that suggests itself is simply that the 'concepts' used in the experimental situation, being defined in terms of conjunction or disjunction

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of elementary physical properties (as is the general procedure in concept-formation experiments), are entirely artificial and mismatched to the 'concept space' of the tested animal. The human subject, however, imposes his own system of concepts (since he understands what the experiment is about, etc.). Under the conditions of the experiment, the distinction between the artificial concepts of the experimenter and the natural concepts of the subject might well be undetectable. Hence it might be that no difference between apes and humans in cross-modal transfer (and nothing about linguistic tags) has yet been shown by such experiments, and that what is shown is merely that an animal (or human) cannot make reasonable use of concepts that are mismatched to the innate structure of his system of concepts.

9 Of the cited conditions, the one that might be regarded as relevant is "knowledge and belief". Thus it makes sense to argue that under certain conditions, a change in belief may entail a modification of language. But surely it is senseless to hold that wherever difference of belief leads to a difference of disposition to verbal behavior, there is necessarily a difference of language involved.


11 The issue is not simply one of observation vs. abstraction, but rather one of significant vs. pointless idealization. A set of dispositions to respond is a construction postulated on the basis of evidence, just as is a generative grammar that attempts to characterize 'knowledge of a language'. In Quine's terms, the first is based on "genuine" and the second on "analytical" hypotheses, but only in a sense of "genuine" that is divorced from its ordinary meaning (or else on the basis of a value judgment that seems to me quite unsupportable). It would be more accurate to say that setting up a "complex of dispositions to respond" is merely a pointless step, since such a structure has no interesting properties, so far as is known.

12 Except, as noted earlier, for the constraints imposed by the structure of the quality, space, the system of truth-functional logic, certain primitive forms of induction, and the capacity to form arbitrary associations.