

tion between the analytic and the synthetic; and I need not say again that this is a distinction which I reject.²²

The issue over there being classes seems more a question of convenient conceptual scheme; the issue over there being centaurs, or brick houses on Elm Street, seems more a question of fact. But I have been urging that this difference is only one of degree, and that it turns upon our vaguely pragmatic inclination to adjust one strand of the fabric of science rather than another in accommodating some particular recalcitrant experience. Conservatism figures in such choices, and so does the quest for simplicity.

Carnap, Lewis, and others take a pragmatic stand on the question of choosing between language forms, scientific frameworks; but their pragmatism leaves off at the imagined boundary between the analytic and the synthetic. In repudiating such a boundary I espouse a more thorough pragmatism. Each man is given a scientific heritage plus a continuing barrage of sensory stimulation; and the considerations which guide him in warping his scientific heritage to fit his continuing sensory promptings are, where rational, pragmatic.

²² For an effective expression of further misgivings over this distinction, see White [2].

III

THE PROBLEM OF MEANING IN LINGUISTICS

1

Lexicography is concerned, or seems to be concerned, with identification of meanings, and the investigation of semantic change is concerned with change of meaning. Pending a satisfactory explanation of the notion of meaning, linguists in semantic fields are in the situation of not knowing what they are talking about. This is not an untenable situation. Ancient astronomers knew the movements of the planets remarkably well without knowing what sort of things the planets were. But it is a theoretically unsatisfactory situation, as the more theoretically minded among the linguists are painfully aware.

Confusion of meaning with reference¹ has encouraged a tendency to take the notion of meaning for granted. It is felt that the meaning of the word 'man' is as tangible as our neighbor and that the meaning of the phrase 'Evening Star' is as clear as the star in the sky. And it is felt that to question or repudiate the notion of meaning is to suppose a world in which there is just language and nothing for language to refer to. Actually we can acknowledge a worldful of objects, and let our singular and general terms refer to those objects in their several ways to our hearts' content, without ever taking up the topic of meaning.

An object referred to, named by a singular term or denoted by a general term, can be anything under the sun. Meanings, however, purport to be entities of a special sort: the meaning of

¹ See above, pp. 9, 21f.

an expression is the idea expressed. Now there is considerable agreement among modern linguists that the idea of an idea, the idea of the mental counterpart of a linguistic form, is worse than worthless for linguistic science. I think the behaviorists are right in holding that talk of ideas is bad business even for psychology. The evil of the idea idea is that its use, like the appeal in Molière to a *virtus dormitiva*, engenders an illusion of having explained something. And the illusion is increased by the fact that things wind up in a vague enough state to insure a certain stability, or freedom from further progress.

Let us then look back to the lexicographer, supposed as he is to be concerned with meanings, and see what he is really trafficking in if not in mental entities. The answer is not far to seek: the lexicographer, like any linguist, studies linguistic forms. He differs from the so-called formal linguist only in that he is concerned to correlate linguistic forms with one another in his own special way, namely, synonyms with synonyms. The characteristic feature of semantical parts of linguistics, notably lexicography, comes to be not that there is an appeal to meanings but that there is a concern with synonymy.

What happens in this maneuver is that we fix on one important context of the baffling word 'meaning', namely the context '*alike in meaning*', and resolve to treat this whole context in the spirit of a single word 'synonymous', thus not being tempted to seek meanings as intermediary entities. But, even supposing that the notion of synonymy can eventually be provided with a satisfactory criterion, still this maneuver only takes care of the one context of the word 'meaning'—the context '*alike in meaning*'. Does the word also have other contexts that should concern linguists? Yes, there is certainly one more—the context '*having meaning*'. Here a parallel maneuver is in order: treat the context '*having meaning*' in the spirit of a single word, '*significant*', and continue to turn our backs on the supposititious entities called meanings.

Significance is the trait with respect to which the subject matter of linguistics is studied by the grammarian. The grammarian catalogues short forms and works out the laws of their

concatenation, and the end product of this is no more nor less than a specification of the class of all possible linguistic forms, simple and composite, of the language under investigation—the class of all significant sequences, if we accept a liberal standard of significance. The lexicographer, on the other hand, is concerned not with specifying the class of significant sequences for the given language, but rather with specifying the class of pairs of mutually synonymous sequences for the given language or, perhaps, pair of languages. The grammarian and the lexicographer are concerned with meaning to an equal degree, be it zero or otherwise; the grammarian wants to know what forms are significant, or *have meaning*, while the lexicographer wants to know what forms are synonymous, or *alike in meaning*. If it is urged that the grammarian's notion of significant sequences should not be viewed as resting on a prior notion of meaning, I applaud; and I say the lexicographer's notion of synonymy is entitled to the same compliment. What had been the problem of meaning boils down now to a pair of problems in which meaning is best not mentioned; one is the problem of making sense of the notion of significant sequence, and the other is the problem of making sense of the notion of synonymy. What I want to emphasize is that the lexicographer had no monopoly on the problem of meaning. The problem of significant sequence and the problem of synonymy are twin offsprings of the problem of meaning.

2

Let us suppose that our grammarian is at work on a hitherto unstudied language, and that his own contact with the language has been limited to his field work. As grammarian he is concerned to discover the bounds of the class *K* of significant sequences of the language. Synonymy correlations of members of *K* with English sequences and with one another are not his business; they are the business of the lexicographer.

There is presumably no upper limit to the lengths of members of *K*. Moreover, parts of significant sequences count as significant, down to the smallest adopted units of analysis; so such

units, whatever they are, are the shortest members of *K*. Besides the length dimension, however, there is a dimension of thickness to consider. For, given two utterances of equal and arbitrary length and fairly similar acoustical make-up, we must know whether to count them as occurrences of two slightly different members of *K* or as two slightly different occurrences of one and the same member of *K*. The question of thickness is the question what acoustical differences to count as relevant and what ones to count merely as inconsequential idiosyncrasies of voice and accent.

The question of thickness is settled by cataloguing the *phonemes*—the single sounds, distinguished as coarsely as possible for purposes of the language. Two subtly differing sounds count as the same phoneme unless it is possible, by putting one for the other in some utterance, to change the meaning of the utterance.² Now the notion of phoneme, thus formulated, depends obviously and notoriously on the notion of sameness of meaning, or synonymy. Our grammarian, if he is to remain pure grammarian and eschew lexicography, must carry out his program of delimiting *K* without the help of a notion of phoneme so defined.

There seems indeed, at first glance, to be an easy way out: he can simply enumerate the phonemes needed for the particular language at hand, and dispense with the general notion of phoneme defined in terms of synonymy. This expedient would be quite admissible as a mere technical aid to solving the grammarian's problem of specifying the membership of *K*, if the problem of specifying the membership of *K* could itself be posed without prior appeal to the general notion of phoneme. But the fact is otherwise. The class *K* which it is the grammarian's empirical business to describe is a class of sequences of phonemes, and each phoneme is a class of brief events. (It will be convenient to swallow this much platonism for present purposes, though some logical maneuvers might serve to reduce it.) The grammarian's problem is in part objectively set for him thus: every speech event which he encounters in his field work

² Cf. Bloch and Trager, pp. 38-52, or Bloomfield, pp. 74-92.

counts as a sample of a member of *K*. But the delimiting of the several members of *K*, that is, the grouping of mutually resemblant acoustical histories into bundles of proper thickness to qualify as linguistic forms, needs also to have some objective significance if the task of the field grammarian is to be made sense of as an empirical and objective task at all. This need is fulfilled if the general notion of phoneme is at hand, as a general relative term: '*x*' is a phoneme for language *L*', with variable '*x*' and '*L*', or '*x*' is a phoneme for speaker *s*', with variable '*x*' and '*s*'. Thereupon the grammarian's business, with respect to a language *L*, can be stated as the business of finding what sequences of phonemes of *L* are significant for *L*. Statement of the grammarian's purpose thus depends not only on 'significant', as we had been prepared to expect, but also on 'phoneme'.

But we might still seek to free grammar of dependence on the notion of synonymy, by somehow freeing the notion of phoneme itself of such dependence. It has been conjectured, for example, by Bühler, that this might in principle be accomplished. Let the continuum of sounds be arranged in acoustical or physiological order in one or more dimensions, say two, and plotted against frequency of occurrence, so that we come out with a three-dimensional relief map in which altitude represents frequency of occurrence. Then it is suggested that the major humps correspond to the phonemes. There are abundant reasons to suspect that neither this oversimplified account nor anything remotely resembling it can possibly provide an adequate definition of the phoneme; and phonologists have not neglected to adduce such reasons. As a means of isolating other points of comparison between grammar and lexicography, however, let us make the unrealistic assumption that our grammarian has some such nonsemantic definition of phoneme. Then his remaining task is to devise a recursive description of a class *K* of forms which will comprise all and only those sequences of phonemes which are in fact significant.

The basic point of view is that the class *K* is objectively determinate before the grammatical research is begun; it is the class of the significant sequences, the sequences capable of

occurring in the normal stream of speech (supposing for the moment that this terminology is itself significant). But the grammarian wants to reproduce this same class in other terms, formal terms; he wants to devise, in terms of elaborate conditions of phoneme succession alone, a necessary and sufficient condition for membership in *K*. He is an empirical scientist, and his result will be right or wrong according as he reproduces that objectively predetermined class *K* or some other.

Our grammarian's attempted recursive specification of *K* will follow the orthodox line, we may suppose, of listing "morphemes" and describing constructions. Morphemes, according to the books,³ are the significant forms which are not resolvable into shorter significant forms. They comprise affixes, word stems, and whole words in so far as these are not analyzable into subsidiary morphemes. But we can spare our grammarian any general problem of defining morpheme by allowing him simply to list his so-called morphemes exhaustively. They become simply a convenient segmentation of heard phoneme sequences, chopped out as convenient building blocks for his purpose. He frames his constructions in the simplest way that will enable him to generate all members of *K* from his morphemes, and he cuts his morphemes to allow for the simplest constructions. Morphemes, like higher units such as might be called words or free forms, may thus be viewed simply as intermediate stages in a process which, over all, is still describable as reproduction of *K* in terms of conditions of phoneme succession.

There is no denying that the grammarian's reproduction of *K*, as I have schematized it, is purely formal, that is, free of semantics. But the setting of the grammarian's problem is quite another matter, for it turns on a prior notion of significant sequence, or possible normal utterance. Without this notion, or something to somewhat the same effect, we cannot say what the grammarian is trying to do—what he is trying to match in his formal reproduction of *K*—nor wherein the rightness or wrongness of his results might consist. We are thus squarely

³ Bloch and Trager, p. 54; Bloomfield, pp. 161-168.

confronted with one of the twin offspring of the problem of meaning, namely, the problem of defining the general notion of significant sequence.

3

It is not satisfactory to say that a significant sequence is simply any sequence of phonemes uttered by any of the *Naturkinder* of our grammarian's chosen valley. What are wanted as significant sequences include not just those uttered but also those which *could* be uttered without reactions suggesting bizarreness of idiom. The joker here is 'could'; we cannot substitute 'will'. The significant sequences, being subject to no length limit, are infinite in variety; whereas, from the dawn of the language under investigation to the time when it will have evolved to the point where our grammarian would disown it, only a finite sample of this infinite manifold will have been uttered.

The desired class *K* of significant sequences is the culmination of a series of four classes of increasing magnitude, *H*, *I*, *J*, and *K*, as follows. *H* is the class of observed sequences, excluding any which are ruled inappropriate in the sense of being non-linguistic or belonging to alien dialects. *I* is the class of all such observed sequences and all that ever will happen to be professionally observed, excluding again those which are ruled inappropriate. *J* is the class of all sequences ever occurring, now or in the past or future, within or without professional observation—excluding, again, only those which are ruled inappropriate. *K*, finally, is the infinite class of all those sequences, with exclusion of the inappropriate ones as usual, which *could* be uttered without bizarreness reactions. *K* is the class which the grammarian wants to approximate in his formal reconstruction, and *K* is more inclusive even than *J*, let alone *H* and *I*. Now the class *H* is a matter of finished record; the class *I* is, or could be, a matter of growing record; the class *J* goes beyond any record, but still has a certain common-sense reality; but not even this can very confidently be said of *K*, because of the 'could'.

I expect we must leave the 'could' unreduced. It has some

operational import, indeed, but only in a partial way. It does require our grammarian to bring into his formal reconstruction of *K* all of the actually observed cases, that is, all of *H*. Further, it commits him to the prediction that all cases to be observed in the future will conform, that is, all of *I* belongs in *K*. Further still, it commits him to the scientific hypothesis that all unobserved cases fall in this *K*, that is, all of *J*. Now what more does the 'could' cover? What is the rationale behind that infinite additional membership of *K*, over and above the finite part *J*? This vast supplementary force of 'could', in the present instance and elsewhere, is perhaps a vestige of Indo-European myth, fossilized in the subjunctive mood.

What our grammarian does is evident enough. He frames his formal reconstruction of *K* along the grammatically simplest lines he can, compatibly with inclusion of *H*, plausibility of the predicted inclusion of *I*, plausibility of the hypothesis of inclusion of *J*, and plausibility, further, of the exclusion of all sequences which ever actually do bring bizarreness reactions. Our basis for saying what 'could' be generally consists, I suggest, in what is plus *simplicity* of the laws whereby we describe and extrapolate what is. I see no more objective way of construing the *conditio irrealis*.

Concerning the notion of significant sequence, one of the two survivals of the notion of meaning, we have now observed the following. It is needed in setting the grammarian's task. But it is describable, without appeal to meanings as such, as denoting any sequence which could be uttered in the society under consideration without reactions suggesting bizarreness of idiom. This notion of a reaction suggesting bizarreness of idiom would want some refinement eventually. A considerable problem of refinement is involved also in the preliminary putting aside of so-called nonlinguistic noises, as well as utterances in alien dialects. Also there is the general methodological problem, of a pretty philosophical kind, which is raised by the word 'could'. This is a problem common to concept-building in most subjects (apart from logic and mathematics, where it happens

to be well cleared up); I have outlined one attitude toward it.

We should also remind ourselves of the oversimplification which I made with regard to morphemes, when I treated them merely as convenient phoneme sequences which our grammarian specifies by enumeration in the course of his formal reconstruction of the class of significant sequences from the phonemes. This is unrealistic because it requires our grammarian to exhaust the vocabulary, instead of allowing him to leave certain open categories, comparable to our nouns and verbs, subject to enrichment *ad libitum*. Now if on the other hand we allow him some open morpheme categories, his reconstruction of the class *K* of significant sequences ceases to be a formal construction from phonemes; the most we can say for it is that it is a formal reconstruction from phonemes and his open morpheme categories. So the problem remains how he is going to characterize his open morpheme categories—since enumeration no longer serves. This gap must be watched for possible intrusion of an unanalyzed semantical element.

I do not want to take leave of the topic of significant sequence without mentioning one curious further problem which the notion raises. I shall speak now of English rather than a hypothetical heathen tongue. Any nonsensical and thoroughly un-English string of sounds can occur within a perfectly intelligible English sentence, even a true one, if in effect we quote the nonsense and say in the rest of our sentence that the quoted matter *is* nonsense, or is not English, or consists of four syllables, or rimes with 'Kalamazoo', etc. If the whole inclusive sentence is to be called normal English speech, then the rubbish inside it has occurred in normal English speech, and we have thus lost the means of excluding any pronounceable sequence from the category of significant sequence. Thus we must either narrow our concept of normality to exclude, for present purposes, sentences which use quotation, or else we must narrow our concept of occurrence to exclude occurrence within quotation. In either event we have the problem of identifying the spoken analogue of quotation marks, and of doing so in general enough

terms so that our concept of significant sequence will not be limited in advance to some one preconceived language such as English.

In any case we have seen that the problem of significant sequence admits of considerable fragmentation; and this is one of the two aspects into which the problem of meaning seemed to resolve, namely, the aspect of the having of meaning. The fact that this aspect of the problem of meaning is in such halfway tolerable shape accounts, no doubt, for the tendency to think of grammar as a formal, nonsemantical part of linguistics. Let us turn now to the other and more forbidding aspect of the problem of meaning, that of likeness in meaning, or synonymy.

4

A lexicographer may be concerned with synonymy between forms in one language and forms in another or, as in compiling a domestic dictionary, he may be concerned with synonymy between forms in the same language. It is an open question how satisfactorily the two cases can be subsumed under a single general formulation of the synonymy concept, for it is an open question whether the synonymy concept can be satisfactorily clarified for either case. Let us first limit our attention to synonymy within a language.

So-called substitution criteria, or conditions of interchangeability, have in one form or another played central rôles in modern grammar. For the synonymy problem of semantics such an approach seems more obvious still. However, the notion of the interchangeability of two linguistic forms makes sense only in so far as answers are provided to these two questions: (a) In just what sorts of contextual position, if not in all, are the two forms to be interchangeable? (b) The forms are to be interchangeable *salvo quo*? Supplanting one form by another in any context changes something, namely, form at least; and (b) asks what feature the interchange is to leave invariant. Alternative answers to (a) and (b) give alternative notions of interchangeability, some suited to defining grammatical correspondences and others, conceivably, to defining synonymy.

In §3 of Essay II we tried answering (b), for purposes of synonymy, with *veritate*. We found that something had still to be done about (a), in view, for example, of the difficulty presented by quotation. So we answered (a), lamely appealing to a prior conception of "word." Then we found that interchangeability *salvo veritate* was too weak a condition for synonymy if the languages as a whole was "extensional," and that in other languages it was an unilluminating condition, involving something like a vicious circle.

It is not clear that the problem of synonymy discussed in those pages is the same as the lexicographer's problem. For in those pages we were concerned with "cognitive" synonymy, which abstracts from much that the lexicographer would want to preserve in his translations and paraphrases. Even the lexicographer is indeed ready to equate, as synonyms, many forms which differ perceptibly in imaginative associations and poetic value,⁴ but the optimum sense of synonymy for his purpose is probably narrower than synonymy in the supposed cognitive sense. However this may be, certainly the negative findings which were summed up in the preceding paragraph carry over; the lexicographer cannot answer (b) with *veritate*. The interchangeability which he seeks in synonymy must not merely be such as to assure that true statements remain true, and false ones false, when synonyms are substituted within them; it must assure further that statements go over into statements with which they as wholes are somehow synonymous.

This last observation does not recommend itself as a definition, because of its circularity: forms are synonymous when their interchange leaves their contexts synonymous. But it has the virtue of hinting that substitution is not the main point, and that what we need in the first place is some notion of synonymy for long segments of discourse. The hint is opportune; for, independently of the foregoing considerations, three reasons can be adduced for approaching the problem of synonymy from the point of view of long segments of discourse.

First, any interchangeability criterion for synonymy of short

⁴ See above, p. 28.

forms would obviously be limited to synonymy within a language; otherwise interchange would produce polyglot jumbles. Interlinguistic synonymy must be a relation, primarily, between segments of discourse which are long enough to bear consideration in abstraction from a containing context peculiar to one or the other particular language. I say "primarily" because interlinguistic synonymy might indeed be defined for the component forms afterward in some derivative way.

Second, a retreat to longer segments tends to overcome the difficulty of ambiguity or homonymy. Homonymy gets in the way of the law that if *a* is synonymous with *b* and *b* with *c*, then *a* is synonymous with *c*. For, if *b* has two meanings (to revert to the ordinary parlance of meanings), *a* may be synonymous with *b* in one sense of *b* and *b* with *c* in the other sense of *b*. This difficulty is sometimes dealt with by treating an ambiguous form as two forms, but this expedient has the drawback of making the concept of form depend on that of synonymy.

Third, there is the circumstance that in glossing a word we have so frequently to content ourselves with a lame partial synonym plus stage directions. Thus in glossing 'addled' we say 'spoiled' and add 'said of an egg'. This widespread circumstance reflects the fact that synonymy in the small is no primary concern of the lexicographer; lame synonyms plus stage directions are quite satisfactory in so far as they expedite his primary business of explaining how to translate or paraphrase long speeches. We may continue to characterize the lexicographer's domain squarely as synonymy, but only by recognizing synonymy as primarily a relation of sufficiently long segments of discourse.

So we may view the lexicographer as interested, ultimately, only in cataloguing synonym pairs which are sequences of sufficient length to admit of synonymy in some primary sense. Naturally he cannot catalogue these true synonym pairs directly, in any exhaustive way, because they are altogether limitless in number and variety. His case is parallel to that of the grammarian, who for the same reason was unable to catalogue the significant sequences directly. The grammarian accomplished

his end indirectly, by fixing on a class of atomic units capable of enumeration and then propounding rules for compounding them to get all significant sequences. Similarly the lexicographer accomplishes his end indirectly, the end of specifying the infinitely numerous genuine pairs of long synonyms; and this he does by fixing on a class of short forms capable of enumeration and then explaining as systematically as he can how to construct genuine synonyms for all sufficiently long forms compounded of those short ones. These short forms are in effect the word entries in his glossary, and the explanations of how to construct genuine synonyms of all sufficiently long compounds are what appear as the glosses in his glossary, typically a mixture of quasi-synonyms and stage directions.

Thus the lexicographer's actual activity, his glossing of short forms by appeal to quasi-synonyms and stage directions, is not antithetical to his being concerned purely and simply with genuine synonymy on the part of forms sufficiently long to admit of genuine synonymy. Something like his actual activity is indeed the only possible way of cataloguing, in effect, the limitless class of pairs of genuinely synonymous longer forms.

I exploited just now a parallelism between the grammarian's indirect reconstruction of the limitless class of significant sequences and the lexicographer's indirect reconstruction of the limitless class of genuine synonym pairs. This parallelism bears further exploiting. It brings out that the lexicographer's reconstruction of the class of synonym pairs is just as formal in spirit as the grammarian's reconstruction of the class of significant sequences. The invidious use of the word 'formal', to favor grammar as against lexicography, is thus misleading. Both the lexicographer and the grammarian would simply list the membership of the respective classes in which they are interested, were it not for the vastness, the infinitude even, of the numbers involved. On the other hand, just as the grammarian needs over and above his formal constructions a prior notion of significant sequence for the setting of his problem, so the lexicographer needs a prior notion of synonymy for the setting of his. In the setting of their problems, the grammarian and the

lexicographer draw equally on our heritage from the old notion of meaning.

It is clear from the foregoing reflections that the notion of synonymy needed in the statement of the lexicographer's problem is synonymy only as between sequences which are long enough to be pretty clean-cut about their synonymy connections. But in conclusion I want to stress what a baffling problem this remaining problem of synonymy, even relatively clean-cut and well-behaved synonymy, is.

5

Synonymy of two forms is supposed vaguely to consist in an approximate likeness in the situations which evoke the two forms, and an approximate likeness in the effect of either form on the hearer. For simplicity let us forget this second requirement and concentrate on the first—the likeness of situations. What I have to say from here on will be so vague, at best, that this further inaccuracy will not much matter.

As everyone is quick to point out, no two situations are quite alike; situations in which even the same form is uttered are unlike in myriad ways. What matters rather is likeness in *relevant respects*. Now the problem of finding the relevant respects is, if we think of the matter in a sufficiently oversimplified way, a problem typical of empirical science. We observe a speaker of Kalaba, say—to adopt Pike's myth—and we look for correlations or so-called causal connections between the noises he makes and the other things that are observed to be happening. As in any empirical search for correlations or so-called causal connections, we guess at the relevance of one or another feature and then try by further observation, or even experiment, to confirm or refute our hypothesis. Actually, in lexicography this guessing at possible relevances is expedited by our natural familiarity with the basic lines of human interest. Finally, having found fair evidence for correlating a given Kalaba sound sequence with a given combination of circumstances, we conjecture synonymy of that sound sequence with another, in English, say, which is correlated with the same circumstances.

As I unnecessarily remarked, this account is oversimplified. Now I want to stress one serious respect in which it is oversimplified: the relevant features of the situation issuing in a given Kalaba utterance are in large part concealed in the person of the speaker, where they were implanted by his earlier environment. This concealment is partly good, for our purposes, and partly bad. It is good in so far as it isolates the subject's narrowly linguistic training. If we could assume that our Kalaba speaker and our English speaker, when observed in like external situations, differed only in how they say things and not in *what* they say, so to speak, then the methodology of synonymy determinations would be pretty smooth; the narrowly linguistic part of the causal complex, different for the two speakers, would be conveniently out of sight, while all the parts of the causal complex decisive of synonymy or heteronymy were open to observation. But of course the trouble is that not only the narrowly linguistic habits of vocabulary and syntax are imported by each speaker from his unknown past.

The difficulty here is not just that those subjective components of the situation are hard to ferret out. This difficulty, if it were all, would make for practical uncertainty and frequent error in lexicographical pronouncements, but it would be irrelevant to the problem of a theoretical definition of synonymy—irrelevant, that is, to the problem of coherently stating the lexicographer's purpose. Theoretically the more important difficulty is that, as Cassirer and Whorf have stressed, there is in principle no separating language from the rest of the world, at least as conceived by the speaker. Basic differences in language are bound up, as likely as not, with differences in the way in which the speakers articulate the world itself into things and properties, time and space, elements, forces, spirits, and so on. It is not clear even in principle that it makes sense to think of words and syntax as varying from language to language while the content stays fixed; yet precisely this fiction is involved in speaking of synonymy, at least as between expressions of radically different languages.

What provides the lexicographer with an entering wedge is

the fact that there are many basic features of men's ways of conceptualizing their environment, of breaking the world down into things, which are common to all cultures. Every man is likely to see an apple or breadfruit or rabbit first and foremost as a unitary whole rather than as a congeries of smaller units or as a fragment of a larger environment, though from a sophisticated point of view all these attitudes are tenable. Every man will tend to segregate a mass of moving matter as a unit, separate from the static background, and to pay it particular attention. Again there are conspicuous phenomena of weather which one man may be expected to endow with much the same conceptual boundaries as another; and similarly perhaps for some basic internal states such as hunger. As long as we adhere to this presumably common fund of conceptualization, we can successfully proceed on the working assumption that our Kalaba speaker and our English speaker, observed in like external situations, differ only in how they say things and not in what they say.

The nature of this entering wedge into a strange lexicon encourages the misconception of meaning as reference, since words at this stage are construed, typically, by pointing to the object referred to. So it may not be amiss to remind ourselves that meaning is not reference even here. The reference might be the Evening Star, to return to Frege's example, and hence also the Morning Star, which is the same thing; but 'Evening Star' might nevertheless be a good translation and 'Morning Star' a bad one.

I have suggested that our lexicographer's obvious first moves in picking up some initial Kalaba vocabulary are at bottom a matter of exploiting the overlap of our cultures. From this nucleus he works outward, ever more fallibly and conjecturally, by a series of clues and hunches. Thus he begins with a fund of correlations of Kalaba sentences with English sentences at the level where our cultures meet. Most of these sentences classify conspicuously segregated objects. Then he breaks these Kalaba sentences down into short component elements, and makes

tentative English translations of these elements, compatible with his initial sentence translations. On this basis, he frames hypotheses as to the English translations of new combinations of those elements—combinations which as wholes have not been translated in the direct way. He tests his hypotheses as best he can by making further observations and keeping an eye out for conflicts. But, as the sentences undergoing translation get further and further from mere reports of common observations, the clarity of any possible conflict decreases; the lexicographer comes to depend increasingly on a projection of himself, with his Indo-European *Weltanschauung*, into the sandals of his Kalaba informant. He comes also to turn increasingly to that last refuge of all scientists, the appeal to internal simplicity of his growing system.

The finished lexicon is a case, evidently, of *ex pede Herculem*. But there is a difference. In projecting Hercules from the foot we risk error, but we may derive comfort from the fact that there is something to be wrong about. In the case of the lexicon, pending some definition of synonymy, we have no statement of the problem; we have nothing for the lexicographer to be right or wrong about.

Quite possibly the ultimately fruitful notion of synonymy will be one of degree: not the dyadic relation of *a* as synonymous with *b*, but the tetradic relation of *a* as more synonymous with *b* than *c* with *d*. But to classify the notion as a matter of degree is not to explain it; we shall still want a criterion or at least a definition for our tetradic relation. The big difficulty to be surmounted in devising a definition, whether of a dyadic relation of absolute synonymy or a tetradic relation of comparative synonymy, is the difficulty of making up our minds as to just what we are trying to do when we translate a Kalaba statement which is not a mere report on fairly directly observable features of the surrounding situation.

The other branch of the problem of meaning, namely the problem of defining significant sequence, led us into a contrary-to-fact conditional: a significant sequence is one that *could* be

uttered without such and such adverse reactions. I urged that the operational content of this 'could' is incomplete, leaving scope for free supplementary determinations of a grammatical theory in the light of simplicity considerations. But we are well schooled in acquiescing in contrary-to-fact conditionals. In the case of synonymy the tyranny of the developing system, the paucity of explicit objective controls, is more conspicuous.

IV

IDENTITY, OSTENSION, AND HYPOSTASIS

1

Identity is a popular source of philosophical perplexity. Undergoing change as I do, how can I be said to continue to be myself? Considering that a complete replacement of my material substance takes place every few years, how can I be said to continue to be I for more than such a period at best?

It would be agreeable to be driven, by these or other considerations, to belief in a changeless and therefore immortal soul as the vehicle of my persisting self-identity. But we should be less eager to embrace a parallel solution of Heraclitus's parallel problem regarding a river: "You cannot bathe in the same river twice, for new waters are ever flowing in upon you."

The solution of Heraclitus's problem, though familiar, will afford a convenient approach to some less familiar matters. The truth is that you *can* bathe in the same river twice, but not in the same river stage. You can bathe in two river stages which are stages of the same river, and this is what constitutes bathing in the same river twice. A river is a process through time, and the river stages are its momentary parts. Identification of the river bathed in once with the river bathed in again is just what determines our subject matter to be a river process as opposed to a river stage.

Let me speak of any multiplicity of water molecules as a *water*. Now a river stage is at the same time a water stage, but two stages of the same river are not in general stages of the same