Supplementary Readings

Chapter 12  Theories and Schools of Modern Linguistics

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The course will deal with linguistics proper, not with languages and language. This science has gone through phases with shortcomings. Three phases may be distinguished, or three successive approaches adopted by those who took a language as an object of study. Later on came a linguistics proper, aware of its object.

The first of these phases is that of grammar, invented by the Greeks and carried on unchanged by the French. It never had any philosophical view of a language as such. That’s more the concern of logic. All traditional grammar is normative grammar, that is, dominated by a preoccupation with laying down rules, and distinguishing between a certain allegedly “correct” language and another, allegedly “incorrect”; which straight away precludes any broader view of the language phenomenon as a whole.

Later and only at the beginning of the 19th century, if we are talking of major movements (and leaving out the precursors, the “philological” school at Alexandria), came the great philological movement of classical philology, carrying on down to our own day. In 1777, Friedrich Wolf, as a student, wished to be enrolled as a philologist. Philology introduced a new principle: the method of critical examination of texts. The language was just one of the many objects coming within the sphere of philology, and consequently subjected to this criticism. Henceforth, language studies were no longer directed merely towards correcting grammar. The critical principle demanded an examination, for instance, of the contribution of different periods, thus to some extent embarking on historical linguistics. Ritschl’s revision of the text of Plautus may be considered the work of a linguist. In general, the philological movement opened up countless sources relevant to linguistic issues, treating them in quite a different spirit from traditional grammar; for instance, the study of inscriptions and their language. But not yet in the spirit of linguistics.

A third phase in which this spirit of linguistics is still not evident: this is the sensational phase of discovering that languages could be compared with one another; that a bond or relationship existed between languages often separated geographically by great distances; that, as well as languages, there were also great language families, in particular the one which came to be called the Indo-European family.

Surprisingly, there was never a more flawed or absurd idea of what a language is than during the thirty years that followed this discovery by Bopp (1816). In fact, from then on scholars engaged in a kind of game of comparing different Indo-European languages with one another, and eventually they could not fail to wonder what exactly these connections showed, and how they should be interpreted in concrete terms. Until nearly 1870, they played this game without any concern for the conditions affecting the life of a language.

This very prolific phase, which produced many publications, differs from its predecessors by focusing attention on a great number of languages and the relations between them, but, just like its predecessors, has no linguistic perspective, or at least none which is correct, acceptable and reasonable. It is purely comparative. You cannot altogether condemn the more or less hostile attitude of the philological tradition towards the comparativists, because the latter did not in fact bring any renewal bearing on the principles themselves, none which in practice immediately opened up any new horizons, and with which they can clearly be credited. When was it recognized that comparison is, in short, only a method to employ when
we have no more direct way of ascertaining the facts, and when did comparative grammar give way to a linguistics which included comparative grammar and gave it a new direction?

It was mainly the study of the Romance languages which led the IndoEuropeanists themselves to a more balanced view and afforded a glimpse of what the study of linguistics was to be in general. Doubtless the growth of Romance studies, inaugurated by Diehls, was a development of Bopp’s rules for the IndoEuropean languages. In the Romance sphere, other conditions quickly became apparent; in the first place, the actual presence of the prototype of each form; thanks to Latin, which we know, Romance scholars have this prototype in front of them from the start, whereas for the Indo-European languages we have to reconstruct hypothetically the prototype of each form. Second, with the Romance languages it is perfectly possible, at least in certain periods, to follow the language from century to century through documents, and so inspect closely what was happening. These two circumstances reduce the area of conjecture and made Romance linguistics look quite different from Indo-European linguistics. It must also be said that Germanic studies to some extent played the same role as well. There the prototype does not exist, but in the case of Germanic there are long historical periods that can be followed.

The historical perspective that the Indo-Europeanists lacked, because they viewed everything on the same level, was indispensable for the Romance scholars. And the historical perspective revealed how the facts were connected. Thus it came about that the influence of Romance studies was very salutary. One of the great defects, from a scholarly point of view, which is common to philology and the comparative phase is a servile attachment to the letter, to the written language, or a failure to draw a clear distinction between what might pertain to the real spoken language and what to its graphic sign. Hence, it comes about that the literary point of view is more or less confused with the linguistic point of view, and furthermore, more concretely, the written word is confused with the spoken word; two superimposed systems of signs which have nothing to do with each other, the written and the spoken, are conflated. The linguistics which gradually developed in this way is a science for which we can take the definition given by Hatzfeld, Darmstetter and Thomas’s Dictionary: “the scientific study of languages”, which is satisfactory, but it is this word scientific that distinguishes it from all earlier studies.

What does it take: 1) as its subject matter 2) as its object or task?

1) a scientific study will take as its subject matter every kind of variety of human language: it will not select one period or another for its literary brilliance or for the renown of the people in question. It will Pay attention to any tongue, whether obscure or famous, and likewise to any period, giving no preference, for example, to what is called a classical period”, but according equal interest to so-called decadent or archaic periods. Similarly, for any given period, it will refrain from selecting the most educated language, but will concern itself at the same time with popular forms more or less in contrast with the so-called educated or literary language, as well as the forms of the so-called educated or literary language. Thus linguistics deals with language of every period and in all the guises it assumes.

Necessarily, it should be pointed out, in order to have documentation for all periods, as far as possible, linguistics will constantly have to deal with the written language, and will often have to rely on the insights of philology in order to take its bearings among these written texts; but it will always distinguish between the written text and what lies underneath; treating the former as being only the envelope or external mode of presentation of its true object, which is solely the spoken language.

2) The business, task or object of the scientific study of languages will if possible be 1) to trace the history
of all known languages. Naturally this is possible only to a very limited extent and for very few languages.

In attempting to trace the history of a language, one will very soon find oneself obliged to trace the history of a language family. Before Latin, there is a period which Greek and Slavic share in common. So this involves the history of language families, as and when relevant.

But in the second place 2), and this is very different, it will be necessary to derive from this history of all the languages themselves laws of the greatest generality. Linguistics will have to recognize laws operating universally in language, and in a strictly rational manner, separating general phenomena from those restricted to one branch of languages or another. There are more special tasks to add; concerning the relations between linguistics and various sciences. Some are related by reason of the information and data they borrow, while others, on the contrary, supply it and assist its work. It often happens that the respective domains of two sciences are not obvious on first inspection; in the very first place, what ought to be mentioned here are the relations between linguistics and psychology — which are often difficult to demarcate.

It is one of the aims of linguistics to define itself, to recognize what belongs within its domain. In those cases where it relies upon psychology, it will do so indirectly, remaining independent.

Once linguistics is conceived in this way, i.e. as concerned with language in all its manifestations, an object of the broadest possible scope, we can immediately, so to speak, understand what perhaps was not always clear: the utility of linguistics, or its claim to be included among those studies relevant to what is called “general culture”.

As long as the activity of linguists was limited to comparing one language with another, this general utility cannot have been apparent to most of the general public, and indeed the study was so specialized that there was no real reason to suppose it of possible interest to a wider audience. It is only since linguistics has become more aware of its object of study, i.e. perceives the whole extent of it, that it is evident that this science can make a contribution to a range of studies that will be of interest to almost anyone. It is by no means useless, for instance, to those who have to deal with texts. It is useful to the historian, among others, to be able to see the commonest forms of different phenomena, whether phonetic, morphological or other, and how language lives, carries on and changes over time. More generally, it is evident that language plays such a considerable role in human societies, and is a factor of such importance both for the individual human being and human society, that we cannot suppose that the study of such a substantial part of human nature should remain simply and solely the business of a few specialists; everyone, it would seem, is called upon to form as correct an idea as possible of what this particular aspect of human behavior amounts to in general. All the more so inasmuch as really rational, acceptable ideas about it, the conception that linguistics has eventually reached, by no means coincides with what at first sight seems to be the case. There is no sphere in which more fantastic and absurd ideas have arisen than in the study of languages. Language is an object which gives rise to all kinds of mirage. Most interesting of all, from a psychological point of view, are the errors language produces. Everyone, left to his own devices, forms an idea about what goes on in language which is very far from the truth.

Thus it is equally legitimate in that respect for linguistics today to claim to be able to put many ideas right, to throw light on areas where the general run of scholars would be very liable to go wrong and make very serious mistakes.

I have left on one side the question of languages and language in order to discuss the object of linguistics and its possible utility.
(Source: F. de Saussure’s *Third Course of Lectures on General Linguistics (1910-1911)*, Pergamon Press, 1993.)
III. The Problem of “Context of Situation”

Returning once more to our native utterance, it needs no special stressing that in a primitive language the meaning of any single word is to a very high degree dependent on its context. The words “wood”, “paddle”, “place” had to be retranslated in the free interpretation in order to show what is their real meaning, conveyed to a native by the context in which they appear. Again, it is equally clear that the meaning of the expression we arrive near the village (of our destination), literally: “we paddle in place”, is determined only by taking it in the context of the whole utterance. This latter again, becomes only intelligible when it is placed within its context of situation, if I may be allowed to coin an expression which indicates on the one hand that the conception of context has to be broadened and on the other that the situation in which words are uttered can never be passed over as irrelevant to the linguistic expression, we see how the conception of context must be substantially widened, if it is to furnish us with its full utility.

In fact it must burst the bonds of mere linguistics and be carried over into the analysis of the general conditions under which a language is spoken. Thus, starting from the wider idea of context, we arrive once more at the results of the foregoing section, namely that the study of any language, spoken by a people who live under conditions different from our own and possess a different culture, must be carried out in conjunction with the study of their culture and of their environment.

But the widened conception of context of situation yields more than that. It makes clear the difference in scope and method between the linguistics of dead and of living languages. The material on which almost all our linguistic study has been done so far belongs to dead languages. It is present in the form of written documents, naturally isolated, torn out of any context of situation. In fact, written statements are set down with the purpose of being self-contained and self-explanatory, a mortuary inscription, a fragment of primeval laws or precepts, a chapter or statement in a sacred book, or to take a more modern example, a passage from a Greek or Latin philosopher, historian or poet – one and all of these were composed with the purpose of bringing their message to posterity unaided, and they had to contain this message within their own bounds.

To take the clearest case, that of a modern scientific book, the writer of it sets out to address every individual reader who will peruse the book and has the necessary scientific training. He tries to influence his reader’s mind in certain directions. With the printed text of the book before him, the reader, at the writer’s bidding, undergoes a series of processes—he reasons, reflects, remembers, imagines. The book by itself is sufficient to direct the reader’s mind to its meaning, and we might be tempted to say metaphorically that the meaning is wholly contained in or carried by the body.

But when we pass from a modern civilized language, of which we think mostly in terms of written records, or from a dead one which survives only in inscription, to a primitive tongue, never used in writing, where all the material lives only in winged words, passing from man to man. There it should be clear at once that the conception of meaning as contained in an utterance is false and futile. A statement, spoken in real life, is never
detached from the situation in which it has been uttered. For each verbal statement by a human being has the aim and function of expressing some thought or feeling actual at that moment and in that situation, and necessary for some reason or other to be made known to another person or persons—in order either to serve purposes of common action, or to establish ties of purely social communion, or else to deliver the speaker of violent feeling or passions. Without some imperative stimulus of the moment, there can be no spoken statement. In each case, therefore, utterance and situation are bound up inextricably with each other and the context of situation is indispensable for the understanding of the words. Exactly as in the reality of spoken or written languages, a word without linguistic context is a mere figment and stands for nothing by itself, so in the reality of a spoken living tongue, the utterance has no meaning except in the context of situation.

It will be quite clear now that the point of view of the Philologist, who deals only with remnants of dead languages, must differ from that of the Ethnographer, who, deprived of the ossified, fixed data of inscriptions, has to rely on the living reality of spoken language in flux. The former has to reconstruct the general situation—i.e. the culture of a past people—from the extant statements, the latter can study directly the conditions and situations characteristic of a culture and interpret the statements through them. Now I claim that the Ethnographer’s perspective is the one relevant and real for the formation of fundamental linguistic conceptions and for the study of the life of languages, whereas the Philologist’s point of view is fictitious and irrelevant. For language in its origins has been merely the free, spoken sum total of utterances such as we find now in a savage tongue. All the foundations and fundamental characteristics of human speech have received their shape and character in the stage of development proper to Ethnographic study and not in the Philologist’s domain. To define Meaning, to explain the essential grammatical and lexical characters of language on the material furnished by the study of dead languages, is nothing short of preposterous in the light of our argument. Yet it would be hardly an exaggeration to say that 99 per cent of all linguistic work has been inspired by the study of dead languages or at best of written records torn completely out of any context of situation. That the Ethnographer’s perspective can yield not only generalities but positive, concrete conclusions I shall indicate at least in the following sections.

Here I wish again to compare the standpoint just reached with the results of Messrs Ogden and Richards. I have written the above in my own terminology, in order to retrace the steps of my argument, such as it was before I became acquainted with the present book. But it is obvious that the context of situation, on which such a stress is laid here, is nothing else but the sign-situation of the Authors. Their contention, which is fundamental to all the arguments of their book, that no theory of meaning can be given without the study of the mechanism of reference, is also the main gist of my reasoning in the foregoing paragraphs. The opening chapters of their work show how erroneous it is to consider Meaning as a real entity, contained in a word or utterance. The ethnographically and historically interesting data and comments of Chapter II show up the manifold illusions and errors due to a false attitude towards words. This attitude in which the word is regarded as a real entity, containing its meaning as a Soul-box contains the spiritual part of a person or thing, is shown to be derived from the primitive, magical uses of language and to reach right into the most important and influential systems of metaphysics. Meaning, the real “essence” of a word, achieves thus Real Existence in Plato’s realm of Ideas; and it becomes the Universal, actually existing, of medieval Realists. The misuse of words, based always on a false analysis of their Semantic function, leads to all the ontological morass in philosophy, where truth is found by spinning out meaning from the word, its assumed receptacle.

The analysis of meaning in primitive languages affords a striking confirmation of Messrs Ogden and Richards’ theories. For the clear realization of the intimate connection between linguistic interpretation and the analysis of the culture to which the language belongs, shows convincingly that neither a Word nor
its Meaning has an independent and self-sufficient existence. The Ethnographic view of language proves the principle of Symbolic Relativity as it might be called, that is that words must be treated only as symbols and that a psychology of symbolic reference must serve as the basis for all science of language. Since the whole world of “things-to-be-expressed” changes with the level of culture, with geographical, social and economic conditions, the consequence is that the meaning of a word must be always gathered, not from a passive contemplation of this word, but from an analysis of its functions, with the reference to the given culture. Each primitive or barbarous tribe, as well as each type of civilization, has its world of meanings and the whole linguistic apparatus of this people – their store of words and their type of grammar – can only be explained in connection with their mental requirements.

In Chapter III of this book the Authors give an analysis of the psychology of symbolic reference, which together with the material collected in Chapter II is the most satisfactory treatment of the subject which I have ever seen. I wish to remark that the use of the word “context” by the Authors is compatible, but not identical, with my use of this word in the expression “context of situation.” I cannot enter here into an attempt to bring our respective nomenclature into line and must allow the reader to test the Relativity of Symbolism on this little example.

V. The Problem of Meaning in Primitive Languages

When sound begins to articulate, the child’s mind develops in a parallel manner and becomes interested in isolating objects from its surroundings, though the most relevant elements, associated with the food and comfort of the infant, have been already singled out previously. At the same time, the child becomes aware of the sounds produced by the adults and the other children of its surroundings, and it develops a tendency to imitate them. The existence of a social milieu surrounding the child is a factor of fundamental biological importance in the upbringing of the human young and it is also an indispensable element in speech formation. Thus the child who begins to articulate certain syllables soon finds these syllables repeated by the adults and this paves the way to a clearer, more articulate enunciation.

It would be extremely interesting to find out, whether and how far some of the earliest articulated sounds have a “natural” meaning, that is a meaning based on some natural connection between sound and object. The only fact here relevant I can quote from personal observation. I have noticed in two children that at the stage where distinct syllables begin to be formed the repeated sound, mat ma, ma . . . appears when the child is dissatisfied generally, when some essential want is not fulfilled or some general discomfort is oppressing it. The sound attracts the most important object in its surroundings, the mother, and with her appearance the painful state of mind is remedied. Can it be that the entry of the sound mama. . . just at the stage when articulate speech begins—with its emotional significance and its power of bringing the mother to the rescue—has produced in a great number of human languages the root ma for mother?

However this might be, and whether the child acquires some of its early vocabulary by a spontaneous process or whether all its words come to it from the outside, the manner, in which the first items of articulate speech are used is the point which is really interesting and relevant for us in this connection.

The earliest words—mama, dada, or papa; expressions for food, water, certain toys or animals are not simply imitated and used to describe, name, or identify. Like the previous nonarticulate expressions of emotion, these early words also come to be used under the stress of painful situations or strong emotions, when the child cries for its parent or rejoices in her sight, when it clamours for food or repeats with pleasure or excitement the name of some favourite plaything of its surroundings. Here the word becomes the significant reaction, adjusted to
situation, expressive of inner state and intelligible to the human milieu.

This latter fact has another very important set of consequences. The human infant, helpless in itself and unable to cope with the difficulties and dangers of its early life, is endowed with very complete arrangements for care and assistance, resulting from the instinctive attachment of the mother and, to a smaller extent, of the father. The child’s action on the surrounding world is done through the parents, on whom the child acts again by its appeal, mainly its verbal appeal. When the child clamours for a person, it calls and he appears before it. When it wants food or an object or when it wishes some uncomfortable thing or arrangement to be removed, its only means of action is to clamour, and a very efficient means of action this proves to the child.

To the child, words are therefore not only means of expression but efficient modes of action. The name of a person uttered aloud in a piteous voice possesses the power of materializing this person. Food has to be called for and it appears—in the majority of cases. Thus infantile experience must leave on the child’s mind the deep impression that a name has the power over the person or thing which it signifies.

We find thus that an arrangement biologically essential to the human race makes the early articulated words sent forth by children produce the very effect which these words mean. Words are to a child active forces, they give him an essential hold on reality, they provide him with the only effective means of moving, attracting and repulsing outer things and of producing changes in all that is relevant. This of course is not the statement of a child’s conscious views about language, but it is the attitude implied in the child’s behaviour.

Following the manner in which speech is used into the later stage of childhood, we find again that everything reinforces this pragmatic relation to meaning. In all the child’s experience, words mean, in so far as they act and not in so far as they make the child understand or apperceive. His joy in using words and in expressing itself in frequent repetition, or in playing about with a word, is relevant in so far as it reveals the active nature of early linguistic use. And it would be incorrect to say that such a playful use of words is “meaningless.” It is certainly deprived of any intellectual purpose, but possesses always an emotional value, and it is one of the child’s favourite actions, in which he approaches this or that person or object of his surroundings. When a child greets the approaching person or animal, item of food or toy, with a volley of the repeated name, he establishes a link of liking or disliking between himself and that object. And all the time, up to a fairly advanced age, the name of an object is the first means recurred to, in order to attract, to materialize this thing.

Scientific method interests the linguist not only as it interests every scientific worker, but also in a special way, because the scientist, as part of his method, utters certain very peculiar speech-forms. The linguist naturally divides scientific activity into two phases: the scientist performs “handling” actions (observation, collecting of specimens, experiment) and utters speech (report, classification, hypothesis, prediction). The speech-forms which the scientist utters are peculiar both in their form and in their effect upon hearers.

The forms of the scientist’s speech are so peculiar in vocabulary and syntax that most members of his speech-community do not understand them. If one wants to read an English treatise on mechanics, it is not sufficient that one be a native speaker of English: one needs also a severe supplementary training.

The effect upon hearers of the scientist’s speech is even more remarkable. In a brief utterance the scientist manages to say things which in ordinary language would require a vast amount of talk. He “manages to say things” — that is, his hearers respond uniformly and in a predictable way. Indeed, their response is even more uniform and predictable than is the hearers’ response to ordinary speeches. This appears strikingly in self-stimulation: by the use of scientific speech-forms (notably, mathematical calculation) we may successfully plan procedures which we could not plan in ordinary language. Moreover, the scientist manages to say very complex things: if his statements were put into ordinary language, the phrases would become so involved (especially in the way of box-within-box syntactic constructions) that the hearers would not “understand” — that is, they could make no conventionally adequate (uniform and predictable) response. Also, it is a remarkable fact, and of great linguistic interest, that many of the scientist’s utterances cannot be made in actual speech, but only in writing: their structure is so complex that a visual record, for simultaneous survey and back-reference, is indispensable.

It is evident that the speech-forms of the scientist constitute a highly specialized linguistic phenomenon. To describe and evaluate this phenomenon is first and foremost a problem of linguistics. The linguist may fail to go very far toward the solution of this problem, especially if he lacks competence in branches of science other than his own. It is with the greatest diffidence that the present writer dares touch upon it. But it is the linguist and only the linguist who can take the first steps toward its solution; to attack this problem without competence in linguistics is to court disaster. The endless confusion of what is written about the foundations of science or of mathematics is due very largely to the authors’ lack of linguistic information. To mention an elementary point: the relation of writing to language appears in a peculiar and highly specialized shape, as we have seen, in the utterances of the scientist. It would be easy to show by examples that a student who blunders as to the relation of ordinary writing to language cannot be expected to make clear formulation of this complex special case.

Among the confusions of this sort there is one which runs deepest, —so deep, in fact, that some non-linguistic students have discovered it for themselves and in more recent discussions have managed to avoid it: the naive transition from speech to inner goings-on. In everyday life, upon the instant that a speech strikes our ears, we respond only to its meaning; that is, we very properly respond to the speech
upon the basis of the normal habits of language, and we do not stop to examine the sounds of the speech or to analyze its grammatical structure. When someone says “I’m thirsty,” we all say “He is thirsty,” and proceed to treat him as one in need of drink. The linguist alone, when acting in his professional capacity, responds to the structure (phonetic, grammatical, lexical) of the utterance. In the matter which here concerns us, this difference is important, because the speech-forms of scientific discourse are not a part of everyday speech and do not serve as everyman’s signals for simple actions such as drawing a cup of water. When the scientist utters one of his queer speeches, the non-linguist cannot summarize the situation by any such unambiguous résumé as the phrase “He is thirsty.” Lacking this, he has developed, in the course of history, a substitute formula. If the scientist says “Two n-spaces in an (n + 1)-space have at least an (n - 1)-space in common,” the non-linguist says of the scientist “He has a concept of a space of n dimensions, a concept of a space of n plus one dimensions, a concept of a space of n minus one dimensions,” and so on. This formula is an uncritical reproduction of the everyday formula of the type “He is thirsty.” When anyone says “I’m thirsty,” we at once behave on the premise that certain things, invisible to us, are happening inside him. Physiology confirms this supposition. Accordingly, when the scientist makes his utterance, we naïvely proceed to make a parallel supposition, to the effect that, inside him, invisible to us, and distinct from his mere speech, there is occurring a Something (a “concept”) which is “represented” or “communicated” (in one-to-one correspondence) by his speech, just as a speaker’s condition of thirst (an unmistakable physiological process) is “represented” or “communicated” by the speech of the thirsty man. Physiology has never confirmed this supposition, and, indeed, one does not expect her to, but resorts to the claim that the Concepts are invisible, intangible, and, in short, non-material entities.

Although I am one of those who believe this claim and the entire baggage of mentalism to be empty and useless, I need not here attempt to re-argue the matter, for the Concept hypothesis, even if one accepts it, is totally irrelevant to the workings of scientific speech. It is one of the very first rules of scientific discourse that the hearers respond only to the (spoken or written) statements of the scientist, and that they do not respond to anything that may be going on inside him; in particular, they do not respond to any supplementary statement about goings-on inside the scientist. Science, we say, is “objective.” And when his turn comes to speak, the scientist knows that he may not expect any allowance to be made for his “subjective” adventures, —for anything that may be going on inside him, —and that his audience will respond only to the exact stimulus-value of his words, determined according to well-fixed conventions. A scientific utterance differs from an ordinary utterance in this, that the conventional response does not allow of variations based upon goings-on inside the person of the speaker or of the hearer. To seek the foundations of scientific terminology in the world of Concepts is to create confusion and paradox. In sum, the goings-on within the scientist, —regard them as physiological or as “mental,” —are explicitly ruled out from the conventional response to scientific speech: the scientist’s “concepts,” “notions,” “ideas,” stomach-aches, and what not play no part in the communication, and what is spoken is accepted only at face value.

II

A typical linguistic situation is that of a person who has been off exploring and returns with a speech: “There is a steep cliff at the far side of that rise in the land,” “Cranberries grow in that marsh,” “There are some good apples in the pantry,” and so on. We call such speeches reports, and we may also call them predictions, for they imply that if you make such and such movements you will incur such and such a
stimulus. We respond to them as we do to other speeches, in various ways, and often with error and confusion. It is for the good of the community, in a simple biologic sense, that this error and confusion be kept to a minimum. The limiting case would be a report so phrased that, as to any biologically or socially relevant features of the response, every member of the community would respond in exactly the same way. In any community, some reports come nearer than others to this limiting case. Some such may be preserved in the way of tradition. In a highly organized community there are specialists in such reporting and in receiving such reports, and the traditional body of these reports is held fast in written form, constituting the “body” of science, and there is developed, as time goes on, a special vocabulary and phraseology suited to the optimum sureness of report, —the terminology of science.

In the phase of observation and experiment we are aware of our limitations and illustrate them by saying that we have no absolute guarantee that the sun will rise tomorrow; in the same way, there is no scientific report to which all qualified persons (and who are they?) will respond in exactly the same way. On the other hand, we probably cannot draw any sharp line between ordinary and scientific reports. Hence, lacking an absolute definition of science, we can say with sureness “This is science” and “This is not science” only part of the time, and we can describe the characteristics of science but cannot sharply define them. One of the most important of these characteristics is to be found in the linguistic phase of science: science uses language-forms to which all qualified persons respond in as nearly as possible the same way. Qualified persons are those who, under the division of labor, have been trained to respond to the language-forms used in science, for these language-forms differ from those of everyday life and most persons cannot respond to them at all. The linguist is interested in studying the origin of these language-forms, their relation to everyday language-forms, their structure, the way the scientist uses them, and so on.

The language-forms which serve us best in this matter are the number-words of everyday speech (one, two, three, ...) and expressions defined in terms of these.

It is at this point that the non-linguist will make a detour. Suppose that we found the word elephant to play an important part in all scientific discourse. The non-linguist would pay scant attention to the word itself but would insist upon a thorough study of elephants, in the way of zoology, before he went on, and if this could not be carried to a conclusion, would insist upon the paradox of our uncertainty about the ultimate nature of elephants, which conflicted with the usefulness of the word elephant in scientific discourse, —an evil paradox, indeed, since, uncertain about the very nature of scientific discourse, we cannot hope to rationalize our knowledge of elephants.

Now, we are not concerned with elephants, and must take them for granted and leave the zoologist to study them. We cannot study everything at once, and must accept with humility the vicious circle of science, as of life, finding our test of success in our ability to predict and to create. We need ask only how the word elephant came to play its part in scientific discourse, what service it does, how it works along with the other terms of scientific speech, and so on.

In every speech-community there are certain speech-forms toward which our response is relatively constant and uniform. The physicist, physiologist, psychologist, and anthropologist who study the situations in which these speech-forms are uttered and the responses which a hearer makes to these speech-forms, may not find them simple at all, but that is none of our present concern. We are concerned merely with the fact that our responses (including further speech) to certain speech-forms are relatively constant and uniform, and that these speech-forms constitute the basis of scientific speech. Here again,
there is no absolute boundary: the more constant and uniform our use of a speech-form, the better suited is this speech-form to scientific reporting. Other things being equal, the more narrowly we restrict a scientific report to speech-forms of maximum response-uniformity, the better will be the success of that report. (pp. 499-505)

The Nature of Text

3.1 Text and “non-text”

The features discussed in the last section — thematic systems, information systems, and the various types of cohesion — represent the specifically text-forming resources of the linguistic system. The first two are structural, in the sense that options in these systems contribute to the derivation of structure: thematic options to the lexicogrammatical structure, being realized through the clause, and informational ones to what we have called the information structure, a distinct though related hierarchy that is realized directly in the phonological system, through the tone group. The cohesive relations are non-structural, not being realized through any form of structural configuration.

It should be stressed that all these are aspects of the semantic system. They are options in meaning, which like other options in meaning are realized through the organization at other strata. In order to give a complete characterization of texture we should have to make reference also to “generic” structure, the form that a text has as a property of its genre. The fact that the present text is a narrative, and of a particular kind, as specified in the general title *Fables for Our Time* — that is, it is a complex of a traditional narrative form, the fable, and a later form, the humorous essay, to which this has been adapted — defines for it a certain generic structure, which determines such things as its length, the types of participant (typically animals given human attributes, or at least human roles, and engaging in dialogue), and the culmination in a moral.

The generic structure is outside the linguistic system; it is language as the projection of a higher-level semiotic structure. It is not simply a feature of literary genres; there is a generic structure in all discourse, including the most informal spontaneous conversation; see Sacks et al. (1974). The concept of generic structure can be brought within the general framework of the concept of register, the semantic patterning that is characteristically associated with the “context of situation” of a text; see Section 4 below, and also Gregory (1967), Halliday (1974), Hasan (1973). The structure of the narrative genre, especially traditional forms of narrative, has been extensively studied across a wide range of different languages, and we shall not attempt to discuss it here; see for example Taber (1966), Chabrol and Marin (1971).

These three factors — generic structure, textual structure (thematic and informational), and cohesion — are what distinguish text from “non-text”. One does not normally meet “non-text” in real life, though one can construct it for illustrative purposes. Here is a passage in which only the thematic structure has been scrambled; everything else, including all other aspects of the texture, is well-formed:

Now comes the President here. It’s the window he’s stepping through to wave to the crowd. On his victory his opponent congratulates him. What they are shaking now is hands. A speech is going to be made by him. “Gentlemen and ladies, that you are confident in me honors me. I shall, hereby pledge I, turn this country into a place, in which what people do safely will be live, and the ones who grow up happily will be able to be their
These patterns are not optional stylistic variants; they are an integral part of the meaning of language. Texture is not something that is achieved by superimposing an appropriate text form on a pre-existing ideational content. The textual component is a component of meaning along with the ideational and interpersonal components. Hence a linguistic description is not a progressive specification of a set of structures one after the other, ideational, then interpersonal, then textual. The system does not first generate a representation of reality, then encode it as a speech act, and finally recode it as a text, as the metaphors of philosophical linguistics seem to imply. It embodies all these types of meaning in simultaneous networks of options, from each of which derive structures that are mapped on to one another in the course of their lexicogrammatical realization. The lexicogrammar acts as the integrative system, taking configurations from all the components of the semantics and combining them to form multilayered, “Polyphonic” structural compositions.

3.2 The text as a semantic unit

The quality of texture is not defined by size. There is a concept of a text as a kind of super-sentence, something that is larger than a sentence but of the same nature. But this is to misrepresent the essential quality of a text. Obviously one cannot quarrel with the use of the term “text” to refer to a string of sentences that realize a text; but it is important to stress that the sentences are, in fact, the realization of text rather than constituting the text itself. Text is a semantic concept.

The same problem has arisen in linguistics with the conception of the sentence as a super-phoneme. A sentence is not an outsize phonological unit; it is a lexicogrammatical unit that is realized in the phonological system, which has its own hierarchy of units. I may be that the sentence in some language or other is marked off by the phonological system, so that it can be identified at the phonological level; but that does not make the sentence a phonological concept. There is developmental evidence that a child builds up his phonology at both ends, as it were, constructing a phonological system on the one hand and individual phonological representations of lexicogrammatical elements on the other — both particular word phonologies and generalized syllable phonologies at the same time; see Ferguson and Farwell (1973). In other words a system is built up both as a tactic system, in its own right, and as the piecemeal realization of elements of a higher-level system. We find an analogous process taking place at the next level up. The child both constructs a lexicogrammatical system and, simultaneously, lexicogrammatical representations of semantic elements. Just as he develops a word phonology side by side with a syllable phonology, he also develops a text grammar side by side with a clause grammar. The “text grammar” in this sense is the realization, in the lexicogrammar, of particular elements on the semantic stratum; and it explains the important part played in language development by the learning of large stretches of “wording” as uninterrupted wholes.

A text, as we are interpreting it, is a semantic unit, which is not composed of sentences but is realized in sentences. A text is to the semantic system what a clause is to the lexicogrammatical system and a syllable to the phonological system. It may be characterized by certain lexicogrammatical features, just as a clause may be characterized by certain phonological features; but this does not make it a lexicogrammatical unit (given that such a unit is to be defined, as we have defined it, by its being the locus of lexicogrammatical structures).

Whether or not, and in what sense, there is a rank scale, or hierarchy, of semantic units, as some linguists
have suggested, must be left undecided. A clause is only one of a number of structure-carrying units in the grammar, and it is not entirely clear why it should be singled out as the primary grammatical constituent; the same applies to the syllable, or any unit that is selected as the basic unit for phonology. The concept of semantic units is much less clearcut, since the concept of semantic structures is less clearcut. In any case the linguistic system as a whole is not symmetrical, as Lamb pointed out in his review of Hjelmslev; see Lamb (1966). Moreover the distinguishing feature of the semantic system is its organization into functional components.

These determine, not units of different sizes, but simultaneous configurations of meanings of different kinds. The semantic analogue of the rank scale would appear to be not some kind of a hierarchy of structural units but the multiple determination of the text as a unit in respect of more than one property, or “dimension” of meaning.

Let us express this more concretely in relation to the text that is under consideration. It constitutes “a text” as defined by the textual component: not only has it a generic structure, but it is also internally cohesive, and it functions as a whole as the relevant environment for the operation of the theme and information systems. In other words it has a unity of what we have called “texture”, deriving from the specifically text-forming component within the semantic system, and this is sufficient to define it as a text. But we are likely to find this unity reflected also in its ideational and interpersonal meanings, so that its quality as a text is reinforced by a continuity of context and of speaker-audience relationship. In fact this “artistic unity” is already contained in the concept of generic structure, and reflected in the specific forms taken by the cohesive relations. So there is a continuity in the time reference (every finite verb in the narrative is in simple past tense, every one in the dialogue is in simple present); in the transitivity patterns (the process types are those of perception, cognition, verbalization, and attribution, except for the very last sentence; and there is a rather even distribution among them); in the attitudinal modes, the form of the dialogue, and so on.

In other words, a text is a semantic unit defined by the textual component. This is not a tautology; rather it is the reason for calling the textual component by that name. A text has a generic structure, is internally cohesive, and constitutes the relevant environment for selection in the “textual” systems of the grammar. But its unity as a text is likely to be displayed in patterns of ideational and interpersonal meaning as well. A text is the product of its environment, and it functions in that environment. In Section 4 we shall explore briefly the way in which we can conceptualize the relation of text to its environment, and the processes whereby specific aspects of a speaker’s or writer’s semantic system tend to be activated by — and hence, in turn, to shape and modify — specific aspects of the environment in which meanings are exchanged.

Meanwhile we should stress the essential indeterminacy of the concept of “a text”. Clauses, or syllables, are relatively well-defined entities: we usually know how many of them there are, in any instance, and we can even specify, in terms of some theory, where they begin and end. A text, in the normal course of events, is not something that has a beginning and an ending. The exchange of meanings is a continuous process that is involved in all human interaction; it is not unstructured, but it is seamless, and all that one can observe is a kind of periodicity in which peaks of texture alternate with troughs — highly cohesive moments with moments of relatively little continuity. The discreteness of a literary text is untypical of texts as a whole.

By “text”, then, we understand a continuous process of semantic choice. Text is meaning and meaning is choice, An ongoing current of selections each in its paradigmatic environment of what might have been
meant (but was not). It is the paradigmatic environment — the innumerable sub-systems that make up the semantic system — that must provide the basis of the description, if the text is to be related to higher orders of meaning, whether social, literary or of some other semiotic universe. The reason why descriptions based on structure are of limited value in text studies is that in such theories the paradigmatic environment is subordinated to a syntagmatic frame of reference; when paradigmatic concepts are introduced, such as transformation, they are embedded in what remains essentially a syntagmatic theory. By what at first sight appears as a paradox, since text is a syntagmatic process (but see Hjelmslev (1961), Section 11), it is the paradigmatic basis of a description that makes it significant for text studies. Hence in glossematics, and similarly in the “systemic” version of system-structure theory, the syntagmatic concept of structure is embedded in a theory that is essentially paradigmatic. Here the description is based on system; and text is interpreted as the process of continuous movement through the system, a process which both expresses the higher orders of meaning that constitute the “social semiotic”, the meaning systems of the culture, and at the same time changes and modifies the system itself. (pp. 45-48)

In discussing the past, I referred to two major traditions that have enriched the study of language in their separate and very different ways; and in my last lecture, I tried to give some indication of the topics that seem on the immediate horizon today, as a kind of synthesis of philosophical grammar and structural linguistics begins to take shape. Each of the major traditions of study and speculation that I have been using as a point of reference was associated with a certain characteristic approach to the problems of mind; we might say, without distortion, that each evolved as a specific branch of the psychology of its time, to which it made a distinctive contribution.

It may seem a bit paradoxical to speak of structural linguistics in this way, given its militant anti-psychologism. But the paradox is lessened when we take note of the fact that this militant anti-psychologism is no less true of much of contemporary psychology itself, particularly of those branches that until a few years ago monopolised the study of use and acquisition of language. We live, after all, in the age of “behavioural science,” not of “the science of mind.” I do not want to read too much into a terminological innovation, but I think that there is some significance in the ease and willingness with which modern thinking about man and society accepts the designation “behavioural science.” No sane person has ever doubted that behaviour provides much of the evidence for this study — all of the evidence, if we interpret “behaviour” in a sufficiently loose sense. But the term “behavioural science” suggests a not-so-subtle shift of emphasis toward the evidence itself and away from the deeper underlying principles and abstract mental structures that might be illuminated by the evidence of behaviour. It is as if natural science were to be designated “the science of meter readings.” What, in fact, would we expect of natural science in a culture that was satisfied to accept this designation for its activities?

Behavioural science has been much preoccupied with data and organisation of data, and it has even seen itself as a kind of technology of control of behaviour. Anti-mentalism in linguistics and in philosophy of language conforms to this shift of orientation. As I mentioned in my first lecture, I think that one major indirect contribution of modern structural linguistics results from its success in making explicit the assumptions of an anti-mentalistic, thoroughly operational and behaviourist approach to the phenomena of language. By extending this approach to its natural limits, it laid the groundwork for a fairly conclusive demonstration of the inadequacy of any such approach to the problems of mind.

More generally, I think that the long-range significance of the study of language lies in the fact that in this study it is possible to give a relatively sharp and clear formulation of some of the central questions of psychology and to bring a mass of evidence to bear on them. What is more, the study of language is, for the moment, unique in the combination it affords of richness of data and susceptibility to sharp formulation of basic issues.

It would, of course, be silly to try to predict the future of research, and it will be understood that I do not intend the subtitle of this lecture to be taken very seriously. Nevertheless, it is fair to suppose that the major contribution of the study of language will lie in the understanding it can provide as to the character
of mental processes and the structures they form and manipulate. Therefore, instead of speculating on the likely course of research into the problems that are coming into focus today, I will concentrate here on some of the issues that arise when we try to develop the study of linguistic structure as a chapter of human psychology.

It is quite natural to expect that a concern for language will remain central to the study of human nature, as it has been in the past. Anyone concerned with the study of human nature and human capacities must somehow come to grips with the fact that all normal humans acquire language, whereas acquisition of even its barest rudiments is quite beyond the capacities of an otherwise intelligent ape a fact that was emphasised, quite correctly, in Cartesian philosophy. It is widely thought that the extensive modern studies of animal communication challenge this classical view; and it is almost universally taken for granted that there exists a problem of explaining the “evolution” of human language from systems of animal communication. However, a careful look at recent studies of animal communication seems to me to provide little support for these assumptions. Rather, these studies simply bring out even more clearly the extent to which human language appears to be a unique phenomenon, without significant analogue in the animal world. If this is so, it is quite senseless to raise the problem of explaining the evolution of human language from more primitive systems of communication that appear at lower levels of intellectual capacity. The issue is important, and I would like to dwell on it for a moment.

The assumption that human language evolved from more primitive systems is developed in an interesting way by Karl Popper in his recently published Arthur Compton Lecture, “Clouds and Clocks.” He tries to show how problems of freedom of will and Cartesian dualism can be solved by the analysis of this “evolution.” I am not concerned now with the philosophical conclusions that he draws from this analysis, but with the basic assumption that there is an evolutionary development of language from simpler systems of the sort that one discovers in other organisms. Popper argues that the evolution of language passed through several stages, in particular a “lower stage” in which vocal gestures are used for expression of emotional state, for example, and a “higher stage” in which articulated sound is used for expression of thought — in Popper’s terms, for description and critical argument. His discussion of stages of evolution of language suggests a kind of continuity, but in fact he establishes no relation between the lower and higher stages and does not suggest a mechanism whereby transition can take place from one stage to the next. In short, he gives no argument to show that the stages belong to a single evolutionary process. In fact, it is difficult to see what links these stages at all (except for the metaphorical use of the term “language”). There is no reason to suppose that the “gaps” are bridgeable. There is no more of a basis for assuming an evolutionary development of “higher” from “lower” stages, in this case, than there is for assuming an evolutionary development from breathing to walking; the stages have no significant analogy, it appears, and seem to involve entirely different processes and principles.

A more explicit discussion of the relation between human language and animal communication systems appears in a recent discussion by the comparative ethnologist W. H. Thorpe. He points out that mammals other than man appear to lack the human ability to imitate sounds, and that one might therefore have expected birds (many of which have this ability to a remarkable extent) to be “the group which ought to have been able to evolve language in the true sense, and not the mammals.” Thorpe does not suggest that human language “evolved” in any strict sense from simpler systems, but he does argue that the characteristic properties of human language can be found in animal communication systems, although “we cannot at the moment say definitely that they are all present in one particular animal.” The characteristics shared by human and animal language are the properties of being “purposive,” “syntactic,” and
“propositional.” Language is purposive “in that there is nearly always in human speech a definite intention of getting something over to somebody else, altering his behaviour, his thoughts, or his general attitude toward a situation.” Human language is “Syntactic” in that an utterance is a performance with an internal organisation, with structure and coherence. It is “propositional” in that it transmits information. In this sense, then, both human language and animal communication are purposive, syntactic, and propositional.

All this may be true, but it establishes very little, since when we move to the level of abstraction at which human language and animal communication fall together, almost all other behaviour is included as well. Consider walking: Clearly, walking is purposive behaviour, in the most general sense of “purposive.” Walking is also “syntactic” in the sense just defined, as, in fact, Karl Lashley pointed out a long time ago in his important discussion of serial order in behaviour, to which I referred in the first lecture. Furthermore, it can certainly be informative; for example, I can signal my interest in reaching a certain goal by the speed or intensity with which I walk.

It is, incidentally, precisely in this manner that the examples of animal communication that Thorpe presents are “propositional.” He cites as an example the song of the European robin, in which the rate of alternation of high and low pitch signals the intention of the bird to defend its territory; the higher the rate of alternation, the greater the intention to defend the territory. The example is interesting, but it seems to me to show very clearly the hopelessness of the attempt to relate human language to animal communication. Every animal communication system that is known (if we disregard some science fiction about dolphins) uses one of two basic principles: Either it consists of a fixed, finite number of signals, each associated with a specific range of behaviour or emotional state, as is illustrated in the extensive primate studies that have been carried out by Japanese scientists for the past several years; or it makes use of a fixed, finite number of linguistic dimensions, each of which is associated with a particular nonlinguistic dimension in such a way that selection of a point along the linguistic dimension determines and signals a certain point along the associated nonlinguistic dimension. The latter is the principle realised in Thorpe’s bird-song example. Rate of alternation of high and low pitch is a linguistic dimension correlated with the nonlinguistic dimension of intention to defend a territory. The bird signals its intention to defend a territory by selecting a correlated point along the linguistic dimension of pitch alternation — I use the word “select” loosely, of course. The linguistic dimension is abstract, but the principle is clear. A communication system of the second type has an indefinitely large range of potential signals, as does human language. The mechanism and principle, however, are entirely different from those employed by human language to express indefinitely many new thoughts, intentions, feelings, and so on. It is not correct to speak of a “deficiency” of the animal system, in terms of range of potential signals; rather the opposite, since the animal system admits in principle of continuous variation along the linguistic dimension (insofar as it makes sense to speak of “continuity” in such a case), whereas human language is discrete. Hence, the issue is not one of “more” or “less,” but rather of an entirely different principle of organisation. When I make some arbitrary statement in a human language — say, that “the rise of supranational corporations poses new dangers for human freedom” — I am not selecting a point along some linguistic dimension that signals a corresponding point along an associated nonlinguistic dimension, nor am I selecting a signal from a finite behavioural repertoire, innate or learned.

Furthermore, it is wrong to think of human use of language as characteristically informative, in fact or in intention. Human language can be used to inform or mislead, to clarify one’s own thoughts or to display one’s cleverness, or simply for play. If I speak with no concern for modifying your behaviour or thoughts, I am not using language any less than if I say exactly the same things with such intention. If we hope to
understand human language and the psychological capacities on which it rests, we must first ask what it is, not how or for what purposes it is used. When we ask what human language is, we find no striking similarity to animal communication systems. There is nothing useful to be said about behaviour or thought at the level of abstraction at which animal and human communication fall together. The examples of animal communication that have been examined to date do share many of the properties of human gestural systems, and it might be reasonable to explore the possibility of direct connection in this case. But human language, it appears, is based on entirely different principles. This, I think, is an important point, often overlooked by those who approach human language as a natural, biological phenomenon; in particular, it seems rather pointless, for these reasons, to speculate about the evolution of human language from simpler systems — perhaps as absurd as it would be to speculate about the “evolution” of atoms from clouds of elementary particles.