Current trends in Chomsky

by David Crystal

When the editor first suggested that it might be useful to have a short article introducing some of Noam Chomsky's ideas, I agreed, and was about to begin when John Lyons' book appeared and made the exercise rather redundant.[1] His introduction is unquestionably the most lucid and coherent account of Chomsky's linguistic work that we have, and I thought it would be pointless to write at that time an article which would in effect be little more than a paraphrase of its topic sentences. There are, however, a few things that might be said about recent trends, not dealt with by Lyons, which are needed in order to complete an outline understanding of the contemporary scene in generative linguistics; also a few critical comments, from someone a mite less sympathetic to the Chomskyan approach than Lyons is, might be helpful to anyone wanting to reach an evaluation of this field. Hence the following remarks. But first, some background, and a review of what Lyons does say.

It is quite remarkable how Chomsky's name has become a vogue word in intellectual circles. He is known about, sometimes, even when his discipline, linguistics, is not. To an academic linguist, of course, this can be embarrassing. I suppose it is always the way when a teenage discipline catches everyone's attention through a famous practitioner: one does not know whether to be grateful, because of the publicity to the subject, or furious, because of the over-simplification and polemic which publicity invariably brings. In Chomsky's case, in this country, the popular awareness of the man dates from the mid-sixties. I recall talking to a number of puzzled academics, in the spring of 1969, who could not understand why anyone should have queued *in the rain* to hear someone speak at Oxford, or queue *without getting in* at University College London, that same year. In common-rooms at that time, everyone seemed to be claiming his work to have particular significance to them—psychologists, philosophers, sociologists, educationalists, biologists—even, sometimes, linguists. Everyone had heard him talking to philosophers on the radio, or read an article on him in one or other of the sophisticated broadsheets—though it must be admitted that few had ever read his *Syntactic Structures*, or *Aspects of the Theory of Syntax*. It was the boldness of his generalizations, the persuasiveness of his appeal to unfamiliar and exciting evidence in support of quite familiar theories, and—to those who heard him—his personal dynamism and fluency which impressed everyone who had come into contact with him. A psychologist ex-friend of mine used to talk of linguistics as 'the science of Chomsky'; but he was only reflecting a general jolly cynicism within the subject, which used to talk about its pre-1957 days (the

[1] *Chomsky*, Fontana Modern Masters, 1970. 120 pp. 30p.

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date of publication of *Syntactic Structures*) as 'linguistics B.C.'! When Chomsky's political opinions became well known, and after he had shared a cell with Norman Mailer (as documented in *Armies of the Night*), his common-room appeal became unprecedented. Professional linguists were delighted. It was nice to see people from other subjects taking any kind of interest in their subject at all.[1]

But the trouble is, having an intelligent interest in Chomsky is a very different thing from understanding him. As always, you have to understand the background of ideas which the innovator was reacting against—and in Chomsky's case, this means the tangle of popular comment and scholarship about language and human behaviour, which can be traced back to the first decade of this century. After this, you have to understand something of the precise means Chomsky chose to develop a more adequate account of language than had previously been available. Thereafter, you may be in a position to assess the linguistic evidence supporting his claims about human nature and behaviour. And this is the point. It is not much use citing Chomsky as an advocate of an innateness-of-ideas theory, for instance, unless you appreciate the specific grounds which have led him to support such a conclusion, as it is precisely these grounds which have made his claims so interestingly different from those of other generations which have argued the point. But it is an unfortunate fact that for every 100 people who are aware of Chomsky's far-reaching claims about the human mind, there may be one who can actually illustrate the concept of competence (on which his view of innateness ultimately depends) with detailed reference to actual structures in a language. Or, to take a different example, if people have been criticizing behaviourism for years, what is there in Chomsky's linguistic approach which makes the critique stimulatingly novel to so many? The answer lies in his detailed analysis of the processes underlying linguistic behaviour; it is on this that the power of his generalizations ultimately rests. It should thus be clear that any serious contact with Chomsky requires preparedness to work through at least some of his analytic techniques. Books introducing him need to face up to his technicality, and not apologize for it. Lyons' approach does just this. It is the gentlest introduction to the initial complexity of generative linguistic techniques that I have seen.

John Lyons on Chomsky

The book begins by carefully contextualizing Chomsky within a discussion of general ideas about language. Why should ideas about

[1]Ironically, the situation is now reversed, and workers from other fields may find themselves labelled linguists without warning, merely because of an interest in language: witness the series of lectures given to the Institute of Contemporary Arts in 1970, and published under the title *Linguistics at Large*. Only six of the fourteen lecturers were professional linguists; the remainder belonged to disciplines with a far more ancient and acceptably-labelled family tree than linguistics is able to show.

language (anyone's, not just Chomsky's) be thought of as relevant for other fields of study? Lyons cites the two main arguments that anyone would use in order to justify the study of language to enquirers: the 'homo loquens' argument—namely, that the primary distinguishing feature between man and other species is language, and that thus language has a peculiarly intimate relationship in discussing whatever properties we may ascribe to the notion of the human mind; and secondly, the 'social cement' argument—that communication, and especially language, is the criterion of social existence. To understand ourselves and our world, then, the question 'What is language?' has to be asked. As part of any answer, Chomsky would want us to take immediate account of the apparently general principles which determine the form of grammatical rules in all languages, and which explain the ability of children to learn language—principles which are so specific that they must be viewed as biologically-determined. The task of the linguist, it is claimed, is to specify the form of these principles, and validate them by reference to descriptions of the structure of particular languages. To do this, it is necessary to develop a more powerful kind of grammatical analysis than has previously existed—transformational grammar. The details Lyons gives later in the book. But the point is made very early on that Chomsky's particular formalization of grammar has produced a model of language which has been of interest to all students of human behaviour, not just linguists.

The question 'What is language?' cited above has by no means a simple or self-evident answer; and in his second chapter, Lyons gives us an outline of the reasons for the complexity. He begins by pointing out the differences between linguistics, as a science of language, and traditional methods of language study. Those who have done some linguistics before may skip this part; but for those who have not it is an essential bit of background to appreciate the main differences between the modern and the pre-scientific approaches to language. It is important to clear one's head of some of the myths about language which have hindered language study for generations (such as the idea that there are 'primitive' languages, or that writing is more important than speech), for many of these traditional assumptions are in flat contradiction to the new myths about language which Chomskyan linguistics has been setting up. After this Lyons presents what would be generally agreed as the two central characteristics of human language—its duality of structure (i.e. analysable into two levels of structure, the syntactic and the phonological), and its creativity (i.e. capacity to construct an infinite number of sentences), two attributes which differentiate language from any non-human system of communication. None of this chapter is particularly controversial. All linguists would agree that language has three main aspects, arising out of the duality notion—sound, grammar, and meaning—though they might dispute what the best

way of formulating the relationship between them is. What Chomsky has done is underline the central role of grammar, as the way in which sounds and meanings are linked, and emphasize, as no one before him had done, the ultimate significance of the creativity principle. It is obvious to all of us now how important the notion of linguistic creativity is; but before Chomsky, no one had really bothered to suggest that the main task of linguistic theory was to take account of it.

Bloomfield's approach

Next, Lyons gives us a bit of historical perspective—an essential chapter, as Chomsky's first main publication (*Syntactic Structures*) was to a great extent an evaluation of and reaction against previously available views of language. Above all, it was a reaction against the range of views and methods which had been codified by Leonard Bloomfield (in his 1933 book, *Language*), and which had come to be collectively labelled 'Bloomfieldian'. This was an approach to language study which had primarily arisen out of the need to describe the languages of the American Indians, before they died out. As traditional grammatical techniques, orientated towards Latin and Greek, were of little value faced with the task of describing the novel structures of these languages, a fresh approach had to be developed, literally, in the field. This is what linguistics was, in its early days—a set of techniques which would enable the largely anthropologist investigators to get as much of a language down on paper and analysed as possible. As each language seemed to have a quite unique grammatical structure, it was essential, if comparative work was to proceed, for clear procedures of analysis to be laid down and consistently followed. Training in phonetic and morphological techniques was rigorous, and to many this knowledge of 'discovery procedures' was the essence of the subject. This was one point. Another characteristic of Bloomfield's approach was its explicit behaviourism, especially noticeable in his attempt to deal with meaning in language without having to have recourse to 'internal' events or interpretations. Meaning was to be described solely by specifying the observable events and dispositions which accompanied people's use of language, and as far as possible, the patterns of pronunciation and grammar which constituted the language were to be mapped out with as little reference to their meaning as possible. Linguistics would be at its best, it was argued, if it could become a purely formal study, the analysis of contrasting sound-patterns: saying what these patterns meant was felt to be a later, largely impracticable, and (to many) a distinctly suspect kind of activity. In studying a language, then, up until the fifties, linguists tended to follow a Bloomfieldian method in their work, beginning with the description of the sounds (phonetics), then of their organization in a 'sound-system' (phonology), then of the way in which they combined

into grammatical units (morphology), and then of the way in which these units worked in sequences to produce phrases, clauses, sentences, or whatever (syntax). The meaning of these units (semantics) was left until last—for the attention of those few linguists who had sufficient staying power (or whose informants had stayed alive that long!). As a direct result of all this, we have a third characteristic of this approach to language (the 'structuralist' approach, as it later came to be called): the linguist restricted his study to the analysis of clearly defined, limited samples of language—collections of utterances of native speakers gathered together as a 'corpus'. Using the accepted procedures, the formal properties of any corpus could be systematically investigated, and a description of a language arrived at.

The reaction against structuralism

These are the main things which Chomsky reacted against; and in Chapter 4 of his book, Lyons begins to discuss the reasons for this reaction, in the light of Chomsky's re-evaluation of what the goals of linguistics are. Linguistics is far more than a set of procedures for discovering the acceptable patterns in a language, Chomsky argues: it is a theory about the nature of language, which can stand independently of the means used to arrive at it. We should be interested in what language is like, what its formal properties are; where and how we get our information is of secondary importance. As Lyons says at one point, the proof of the pudding is in the eating. Again, it is argued, linguistics is far more than a purely formal study: meaning, far from being left to the end of an investigation, should be taken account of right from the beginning. The whole notion of contrasts between linguistic structures, implicit in the Bloomfieldian approach, pre-supposes a theory of meaning, and this ought to be faced up to. And also, there is far more to language than what we see represented in a corpus. The utterances collected by a linguist are inevitably but a small fragment of all the utterances possible in the language, and it is this infinite potentiality which the linguist ought to be trying to capture in his descriptive statements. Instead of restricting his attention to the detailed study of a person's 'performance' (i.e. his physical spoken or written output), the linguist should be trying to study the system of rules which underlies this behaviour, rules which constitute the native-speaker's knowledge of his language—in a word, his 'competence'. Performance is necessarily an incomplete picture of a language, full of mistakes and limitations, which a grammar has to eliminate if it is to be an adequate representation of what people accept as possible in their language. For example, a sentence of a million words is possible, and could be constructed without breaking any grammatical rules; it thus has to be allowed for by the grammar, despite the fact that, for various obvious reasons, it is unlikely ever to be used. Linguistic theory should be concerned with how grammars are written which

will reflect this competence; and also, as a more sophisticated goal, with how one might decide, given two alternative grammars of a language, which is the better. This is the reasoning, then, which lies behind Chomsky's definition of a grammar, as a device which generates all the sentences of a language—that is, all possible sentences. It does this by casting its statements about linguistic utterances in the form of abstract rules which describe the underlying structure of sentences.[1] There are, it would seem, a finite number of rules which, when applied in a certain order, are capable of producing a description of the underlying structure of any conceivable sentence. Language makes infinite use of finite means, it has been said. (The rules must be finite, for otherwise they would be unlearnable—by a child, for instance.) The job of the linguist, accordingly, is to specify the form of these rules, and their order of application, in working out the structures of a language; and this task is to be carried out as explicitly as possible—that is, the grammar should contain all the information needed in order to decide whether a sentence is a grammatical, acceptable one, or not. This is the sort of thing which is meant when we talk, as Lyons does, of Chomsky's main contribution being the formalization of grammatical analysis.

Transformational grammars

From here, Lyons moves to a detailed study of the various models of analysis which Chomsky evaluated prior to working out his own approach. In three succinct chapters, he deals with finite-state grammars, and why they are insufficient to carry out the ambitious aims referred to in the previous paragraph; phrase-structure grammars, and why these are useful as a start along this road, though not sufficiently powerful to go all the way; and lastly, transformational grammars, which, it is claimed, can do everything that is required. This is not the place to go into details, but one point must be made, if discussants of Chomsky's thinking are to stay on the same wavelength; namely, that there have been considerable changes in his views between the publication of his first major book, *Syntactic Structures*, and his last main statement, *Aspects of the Theory of Syntax*, published in 1965. Lyons characterizes the most important changes, and it is important to know what these are. The fundamental distinction between competence and performance, for instance, was made explicit only in the early 1960s, as was the equally basic distinction between the 'surface' structure of a sentence and its underlying, or 'deep' structure. This last point is brought in at the end of Lyons' discussion, and it should not be underestimated. For some grammarians of the generative persuasion, the distinction between deep and surface structure is the whole essence of the approach, and would be introduced as an initial explanatory

[1]This use of the term 'rule' is not to be identified with the particular 'rules of correctness', which are a regular part of popular discussion of language.

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principle, instead of being left till last (as Lyons' chronologically-orientated account forces him to do). This distinction also embodies a reaction by Chomsky against the earlier, structuralist approach. In the structuralist view of things, the analysis of a sentence would largely be carried out by studying the observable patterns which the structure manifested; but the important point, which might be missed by this procedure, is that often two sentences which look the same 'on the surface' are, in fact, very different 'deep down', in their meanings; and some sentences which look very different on the surface are, in fact, closely related in their meanings, or even identical —paraphrases of each other. An example of the former, used by Chomsky, is the difference between the apparently identically-structured 'John is easy to please' and 'John is eager to please', where the same surface subject, 'John', is *doing the pleasing* in the second example (i.e. he is the underlying, or 'deep' subject of the sentence), whereas he is *being pleased* in the first (i.e. he is the underlying object). An example of the latter would be the paraphrase relationship between active and passive sentences.

It is important to note that the development of the deep/surface structure distinction is of relatively recent origin, as it helps guard against a view of generative linguistics which sees it as too monolithic and static. Far from this being the case, theoretical developments in this area are now emerging so rapidly that it is often extremely difficult to keep up with what is going on. In particular, in recent work, the idea that a grammar should above all be trying to account for the meanings of a language's structures has been much emphasized, and this has led to a change in thinking. Instead of the earlier approach, where the idea was to generate a set of structures underlying sentences, and then assign meanings to these structures, now the idea has developed that it might be better to take the bull by the horns and generate a set of meanings first, thereafter seeing what range of syntactic forms can express them. Thus we find such people as Charles Fillmore, in his 'case grammar', attempting to specify a primitive set of meaning-relations which he hypothesizes underlies the structure of any sentence in a language—and also, perhaps, in any language.

After Chomsky

The study of the boundary-line between syntax and semantics, and what the properties of meaning are, are nowadays central features of the generative linguistic scene. Lyons' book does not go this far. It stops short of a discussion of the current trends in generative theory, associated with such names as James McCawley, George Lakoff and John Ross, who are in many respects sharply opposed to some of Chomsky's assumptions. Even the fundamental notion of deep structure has come under attack from this quarter, the argument being that it is an unnecessary concept, which causes more

problems than it solves. If you want to relate syntax to meaning, it is said, then you can do so directly, without having to channel your thoughts through an intermediate level of deep structure. The argument is far-reaching, affecting the very basis of our view of the necessary form of a grammar, and it is by no means concluded. What has to be borne in mind, for someone beginning the study of Chomsky, is that to many linguists in the United States, his approach is already seen as the 'orthodox' one. Depending on your sympathies, some would call it 'classical', others 'old-fashioned'. There are, nowadays, various 'schools' of generative grammar, each based on its own combination of assumptions (or 'insights') to do with language learning, universal principles, the nature of deep structure, and so on, and each developing their positions with unprecedented rapidity. A situation where next week's publication is necessarily the most important contribution to date is a not unfamiliar one in other fields; and Lyons is right not to deal with it in this one. Any attempt to do so would be in danger of focussing on observations which in a year or so would turn out to be trivial or wrong; and in any case it is not possible to understand recent trends without a good general grounding in early work. (In passing, I know of a number of people who do not bother to read the current output of generative linguists unless it is still being referred to six months or so after the original date of publication: a cynical attitude, perhaps, but a time-saving one!)

Innateness

The remaining two chapters of Lyons' book go into the more general and recent sides of Chomsky's thinking—the psychological and philosophical implications of the generative approach. The mentalistic implications come from a consideration of the notion of competence. If the aim of a grammar is to specify the rules which account for a speaker's knowledge of his language, then it is likely that you will end up ascribing psychological reality to these rules, and saying that grammar is basically a representation of mental processes. Mentalism is not an inevitable concomitant of generativity —Lyons himself, for instance, is not a mentalistic generative grammarian—but Chomsky is. And his arguments in favour of a mentalistic view of the discipline of linguistics and of the need to recognize an argument about innateness are largely motivated by his assumptions about the nature of competence. Competence is a speaker's tacit knowledge of his language; a theory of language must show, *inter alia*, how such competence has come to be acquired; if then, one wishes to show a continuity of development in children, one must postulate that at least some of the characteristics of this adult competence must be 'generically' present in young children, and (when the argument is taken to its conclusion) that some of the basic properties of language must be innate. When one considers certain

other relevant facts, argues Chomsky—such as the rapidity with which the child acquires the basic structures of his language, or the similarity in the order of acquisition of these structures which different children and different languages manifest—then the plausibility of a hypothesis that the brain is so structured as to incorporate some kind of language-sensitive learning process, which is triggered when a child reaches a certain level of maturation and is exposed to speech patterns, is evident. Ability to recognize sentences, and the main parts of sentences (e.g. the 'actor-action' relationship), would be examples of two hypothetical innate capabilities.

In a concluding chapter, Lyons introduces some general criticisms which might be made of the claims of this approach. In particular, he points out that the problem facing those who maintain the innateness hypothesis is that it is very difficult to be sufficiently specific about it for it to be interpretable and testable. To someone who still values experimental research, one would have grounds for saying that the hypothesis is unverifiable, and thus unscientific. Certainly its claims do need to be made clear, and so far they have not been. Exactly how many structures are supposed to be innate? Or, less strongly, exactly how many structures are indeed universal? The point is that we do not know, and we are a long way from finding out. Of the 10,000 or so languages in the world, very few have ever been studied and only English has really been looked at thoroughly. The dangers, of course, are obvious: some of the universal characteristics of language are going to look remarkably like the specific characteristics of English. It has been argued, rudely, that if Chomsky had been a Korean, the whole shape of a generative grammar, and the hypothesized universals, would have been very different. Perhaps. But until a vast amount more data gets analysed than we have at present, from a variety of languages of different families, it is premature, to say the least, to be dogmatic about whether or not the brain is pre-structured in any way, or whether the best characterization of any such innateness lies in a generative formulation.

Competence and performance

There are other criticisms which have been made, that Lyons does not deal with in his book. The most important, in my view, is to do with the nature of competence. The distinction between competence and performance which Chomsky draws is claimed to be an extremely sharp one, but one wonders just how sharp it is. Many of the features of speech are 'dismissed' as performance, when it might be argued that they are central to any study of the nature of language as are the features already studied under the heading of competence. The intonation of a language is one example which causes a problem: until recently, it was almost completely ignored as a matter worthy of investigation under this heading. The way in

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which sentences form sequences which are sometimes quite rule-governed is another example: such discourse-relations cannot be arbitrarily labelled as 'stylistic', and dismissed as performance. A third example is the need to take account of the appropriateness of sentences to their contexts of usage (the so-called 'sociolinguistics' of language), and there are signs that the attack on the competence/performance distinction is going to be particularly strong under this heading. The sociolinguists do not like a model which views most of their work as marginal, 'mere' performance. To them, the question of meaning is no more important than the question of language *in use:* whether a sentence is acceptable or intelligible may depend on its syntax, but it may also depend on whether the user has chosen to use it in the right situation. As a native speaker, I have developed tacit knowledge about the rules of linguistic appropriateness and taboo, and, it might be argued, a theory of language ought to take central account of this. Scholars such as Dell Hymes, with his concepts of 'communicational competence' and 'ethnography of speaking', would argue thus, and, in my view, they have a point.

The original insights of Chomsky's approach were, and remain, illuminating and far-reaching. He has given us tools for getting to grips with the real complexity of language, and shown us how to use them precisely; more important, he has made it very clear to all exactly why we are digging. Whether his insights are sufficient to enable us to carry out a complete analysis of language is quite uncertain, at present; and according to some (for instance, Charles Hockett, in *The State of the Art*, 1969) language is not capable of being adequately analysed using the set of assumptions which generative grammar maintains. Moreover, it is premature to go overboard for generative grammar in the absence of any contenders: no other linguistic theory has been investigated to the extent that generative theory has, and it is likely that alternative and comparably convincing approaches will develop over the next few years. What is not likely, however, is for any new approach to develop without displaying some influence of Chomsky's thinking. As Lyons says, on his final page, even if his attempt to formalize our concepts of language analysis should fail, his ideas have undoubtedly increased our understanding of these concepts. From this point of view, the 'Chomskyan revolution' cannot but be successful.