1 Introduction

1.1 The benefits of language

It might be premature to decide whether our species has been an evolutionary success or not, but the number of its members has clearly increased exponentially during the last 100,000 years or so. Most probably, one of the main reasons why humans have been so extraordinarily successful in reproducing before dying is that they have language.

Language helps humans to establish within their minds representations or models of the worlds in which they live, and enables them to carry out experiments on those models. Since these experiments take place in the virtual realities of their minds, humans do not have to suffer their actual, potentially harmful consequences. Indeed, the particular ease with which language allows them to direct and control their own thinking seems to distinguish them from most other animal species, which seem to be much more strongly constrained – be it by external stimuli or by instincts – in what they 'think about'.

Language also allows them to share knowledge. Each individual can thus learn about the experience of others and avoid repeating their mistakes. The possibility of sharing information through language is not only good for individual humans, however. It is socially significant as well, since it makes all human beings, at least potentially, useful to one another. This might be an important factor behind the unique social instincts that characterise the human species. Unless humans had good reasons to expect of each of their co-speciates that they might come to learn something useful, they might not generally treat each other with a co-operativeness and apparent selflessness that is otherwise rare in the animal kingdom.

Apart from making information communicable and tradable, language also facilitates co-operation in a more general sense. As a means of 'gently' manipulating the behaviour of others through commanding, requesting, negotiating or – more indirectly – through altering their perception of reality, language provides a flexible medium for groups to co-ordinate their

actions and to pursue goals which, although beneficial to all members, would exceed the capacity of any single individual.

Finally, language may play yet another role in establishing and maintaining coherence in human groups. Being acoustically transmissible with relatively little physical effort, it makes it easier for group members to identify each other quickly, reliably and from relatively safe distances. If an individual recognises that another one speaks like itself, it will identify it as a member of its group and treat it accordingly. Although this aspect of language does have its sinister aspects (just consider how humans have tended to behave towards co-speciates who do not speak like them), it may have been the decisive factor which allowed early humans to live together in groups comprising as many as 150 individuals. This greatly exceeds the group size typical among other primate species, and as has recently been suggested (Dunbar 1996), it may have even constituted the crucial selective pressure which got the human language faculty off the ground in the first place.

It is obvious, then, that language is a good thing to have, both for us as individuals and for our species as a whole.

1.2 . . . its shortcomings

Although language is definitely very useful, however, there will be hardly anybody who has not become aware – at one time or another – of its limitations and, indeed, its dark side. To begin with, we all know how easy it is to be misunderstood or to misunderstand, we all have experienced the agony of groping, in vain, for the proper words to express specific thoughts. People who are better than others at using language often acquire high social prestige or draw material benefit from their talents. But even among professional writers, speakers or even poets it has always been a commonplace that *les mots justes* are extremely hard to find and that some things seem beyond the reach of language altogether.

Another of its not so helpful properties is that language has a way of diversifying into different languages, dialects, styles, registers and even individual 'ways of speaking'. This diversity has always tended to be exploited by human selfishness and to nurture feelings of xenophobia. We despise or envy each other for the ways we speak, we form coalitions against each other on linguistic grounds, and we have come to make enemies of those who speak differently.

Finally, the very power of language as a device for influencing others can of course be exploited not only for good and altruistic, but also for selfish and downright evil purposes.

Most human societies are aware of the limitations of and the dangers inherent in human language and many have tried to come up with ways of reducing language related risks: children are sent to school, are trained in the most profitable use of their mother tongues, and are taught to understand and see through the rhetorical tricks of demagogues. Also, a considerable and growing number of people all over the world are taught foreign languages, so that the gaps between linguistically different communities are more easily bridged. Finally, institutions of research and higher education that dedicate themselves to the study of human language have spread all over the globe during the last one hundred years.

1.3 . . . and ways of studying it

Clearly, the central role which language plays in human existence represents an almost self-evident justification for all efforts directed at studying and understanding it better. Yet, language, omnipresent in human lives though it may be, is rather elusive as an object of rational enquiry and difficult to pin down for analysis. To see why this is so, let us take a crude first look. In everyday experience language typically comes across as a kind of 'tool'. Common sense regards it as 'a system of knowledge that is put to use in speaking and understanding' (Chomsky 1988: 15) and that seems to serve people as a 'means' of communication (both with others and with oneself). How, then, might this 'tool' be studied and understood?

1.3.1 Observation and inference in language modelling

If one thinks of language as a tool, even if only metaphorically, it is reasonable to ask oneself in what ways tools in general are examined and investigated when one wants to understand how they work. Of course, tools in the normal sense of the word are artefacts designed and constructed by humans, and if one knows the actual designer of a particular tool, one can ask him how it works, or can ask, at least, for blueprints or building instructions. In the case of natural human languages, however, this option is clearly not available because, for all that is known, they are not artefacts in the normal sense. Languages have not been designed by anybody in particular at all.

When one does not know the designer of a tool, one can still try to understand its design and function through reverse engineering. One dismantles the tool, looks at the nature and arrangement of its parts, and

tries to work out how they interact to produce its specific effects. If one succeeds, one can then reconstruct the plan and the intentions behind the tool. Unfortunately, however, this approach faces serious problems when applied to language, since many of its aspects are simply impossible to dismantle in such a way that their constituents could be easily isolated and observed. This has several reasons. To begin with, it is not at all obvious what exactly to take apart if one wants to lay open 'the internal mechanics of language'. Language seems to manifest itself in a variety of different domains, such as in texts, in behaviour, in individual speakers' competence, or in social conventions. Where exactly, and in what manner does 'it', that is, the tool that we are interested in, exist then? Which, if any, of its manifestations should be considered primary? As we shall see below, the issue is rather complex and forces one to make subtle, yet principled decisions.[1] Secondly – albeit closely related to the ontological problem – there exist good reasons to suspect that at least much of language is part of the human mind. The mind, of course, is still somewhat of a white spot on the scientific landscape, and relatively little is known about it. To make things worse, all that *is* known about it suggests that the properties of minds depend most crucially on the workings of human brains, and – for both practical and ethical reasons – we are in no position to take those apart for the purposes of academic enquiry.[2]

Now, if one cannot dismantle a tool and look at its parts, the only way in which one can try and develop an idea about its internal mechanics is through inference. One observes the behaviour of the tool under variable and controlled conditions and then tries to imagine what kind of construction could achieve the observed effects. The hypothetical blueprint which one thus constructs might also be called a 'theory' or 'model' of the tool. The problem with such indirectly derived models is that one can never be sure how similar they actually are to the 'real' machine of which they are supposed to be models. One will never really know if the model and the original look alike inside, even though both might 'behave' almost identically. For practical purposes, this may not make a

[1] It might be necessary to stress already at this point, however, that 'language', if it is viewed as a tool, cannot at the same time be identified with 'texts'. Text, i.e. the output produced with language tool, can of course be 'taken apart' and analysed rather easily (at least in certain ways), but the same does clearly not hold for the 'tool' itself, which includes the mental machinery involved in both producing and understanding textual output.

[2] As a matter of fact, the last decades have seen the development of techniques by which activity within human brains can actually be measured and recorded without damaging the brains themselves. The best known ones are 'Positron Emission Tomography' (PET), 'Magnetic Resonance Imaging' (MRI) and the 'Superconducting Quantum Interference Device' (SQUID) (Rose 1992: 131–4). It is fair to say, however, that the measurements they permit are still fairly rough and don't yield sufficiently fine-grained pictures for most linguistic purposes, so that the claim to which this footnote refers is still largely valid.

big difference. Having a good 'model' might even put one in a position to design new tools that are just as efficient as, or even better than, the original in performing certain tasks. Still, one will never ultimately know whether one's model faithfully represents the internal make-up of the original, and there will always remain the possibility that circumstances might arise – not encountered before – in which one's model will behave differently from the original after all. Should this happen, one will have to revise and adapt one's model accordingly.[3] In short, modelling a tool through inferring its internal mechanics from its observable effects tends to strike one as somewhat unsatisfactory, yet if the tool under consideration is language, it is the only choice one has.

1.3.2 Modelling by inference: data problems

Apart from being somewhat unsatisfactory, however, the intention of deriving a model of language by the observation of its effects also forces one to make a number of preliminary decisions and theoretical assumptions, which – at least in the case of language – is rather difficult. For instance, even if one can model language only by inference rather than by taking it apart and actually looking at it, it is necessary to take a stance on the problem of what it 'actually' is; that is to say its ontology. One cannot just model away, as it were, without first having a reasonable idea of what it is that one is constructing a model of. Putting it in slightly different terms, the question arises as to what in the observable world does actually constitute evidence of language and how 'language in and by itself' should be conceptually disentangled from and then related to that evidence. Already, in the context of this rather basic problem, it turns out that the everyday meaning of the word *language* is highly ambiguous and likely to create considerable confusion in focused academic enquiry.

In fact, 'language' in the everyday sense seems to be multi-faceted and to assume many different shapes as soon as one begins to question preliminary common sense notions. Of course, it manifests itself most obviously as 'text', that is, complex patterns of speech or writing. In this form, language is comparably easy to observe. Texts are part of the material world 'out there' and can be described in a detached and intersubjectively verifiable manner. It is easy to agree, for example, that the word *language* consists of eight letters, that the one in position two is identical with the one in position six, and so on. However, its textual manifestation cannot be all there is to language. There is clearly more to it than just the

[3] This argument is well known in the philosophy of science, of course, as the Popperian insight that theories can never be ultimately 'verified' and can at best be regarded as not yet falsified (Popper 1968).

textual shapes in which it comes. For example, the word *language* does not only have a shape, but also expresses some meaning and it is only this that makes it language. Otherwise it would just be a pattern of black shapes on white background. In order for textual patterns to 'have meaning', however, their form is not sufficient. Instead, speakers need to be involved: either those who produce texts to 'express' meaning, or those who interpret them to 'recover' it. It is important to note that the kind of meaning that gets associated with particular textual patterns depends at least as much on what speakers do with them as on the structures of the texts themselves. The American philosopher Daniel Dennett (1990, and http://ase.tufts.edu/cogstud/papers/intrptxt.htm) has contrived a nice little text which will get two radically different meanings when 'processed' by either English or French speakers, and which illustrates the often underestimated role which speakers play in endowing texts with meaning.

(1) GRAND LEG – SEIZE OURS

In the first case, it can be interpreted to 'mean' or to 'express' something like *You have (a) great leg(s). Why don't you touch ours/mine?*, in the second something like *Great heritage! Sixteen bears!* Of course, this example is made up for the purpose and not a very natural text, but it does drive the point home quite impressively. Language must be more than texts.

From a different perspective 'language' could, for instance, be regarded as a form of human behaviour that involves mental and physiological processes somehow linking 'meanings' to 'texts'. An established term for language in this dynamic, procedural sense is 'discourse'.[4] Observing and describing it is more challenging in many ways than analysing static texts, but both the physiological aspects of the processes involved (such as articulation or auditory perception) as well as the behavioural context of discourse (including many of the effects it has on people, for example) are still relatively amenable to detached, empirical observation.

Yet, even communicative behaviour cannot be all there is to language. After all, there is a sense of 'language' in which speakers 'have it' even while they do not actively use it. It appears to exist in speakers' minds as a cognitive potential for producing or interpreting an infinite number of possible utterances. Often referred to as linguistic 'competence' (e.g. Chomsky 1965: 4), language in this sense represents a system of knowledge which speakers draw upon when they engage in linguistic behaviour and produce or interpret texts. This cognitive or mental implementation

[4] Defined in Beaugrande 1997 as 'the level of the total communicative event, including discoursal moves, gestures, facial expressions, emotional displays, and so on, in contexts of situation' (44).

of language is more difficult to investigate than either discourse or its textual products, of course. It cannot be directly observed except through introspection, and introspection is by definition subjective, which makes it highly problematic as a method in empirical science.

The fact that nobody can introspect any other except their own minds is particularly unfortunate, because the fact that language works for interpersonal communication implies that it must necessarily transcend the level of individual speakers in some way or other. Thus, another manifestation of language is *social*. Any language is always shared by a community of speakers. At the same time, no two speakers of 'a' language speak exactly alike, which suggests that their linguistic competences will differ as well, and this means that, in the super-individual or social sense, a 'language' will be 'complete' only within its speech community as a whole and not fully represented in any single mind at all.[5]

There are still more senses in which the word 'language' can be used. One of them is *biological*. The human species is alone in 'having' language, and at the same time, and although there are large differences between the languages that humans speak, all of them do speak one, if they are healthy. Thus, the capacity for linguistic behaviour, that is, the acquisition and use of a human language, is a species specific human universal, and must therefore have a biological and ultimately genetic basis. In the sense which refers to that capacity, 'language' is often also called an 'instinct', or an 'organ' (e.g. Pinker 1994), and can be studied in neuro-physiological, and genetic terms.

Finally, there is a completely abstract, or even *metaphysical* sense in which the word 'language' can be employed. For instance, a 'language' can be said to 'exist' without being used or known by living speakers or communities at all. This is true of so called 'dead' languages, which may occasionally be 'revived'. Thus, classical Hebrew was extinct as a spoken language for many centuries before it came to be 'resurrected' as the official language of the modern state of Israel. It thus seems to have 'existed' somewhere outside the domain of spatio-temporal boundedness altogether, 'kept alive' in a world of abstract knowledge (the well-known philosopher of science Charles Popper might have referred to it as *World Three;* see, for instance, Popper 1968a).

1.3.3 Modelling by inference 2: modelling what, how and why?

As we have seen, it is already difficult to decide where even to look for language in order to study it, and it will certainly be wise to try and

[5] 'For language [langue] is not complete in any speaker; it exists perfectly only within a collectivity' (Saussure 1959: 21).

disentangle the many phenomena referred to as 'language' from each other – both if one wants to analyse or model any of them in detail, and if one wants to understand the relations among them. Unless one has at least a crude preliminary understanding of what one should focus on, 'language' in its comprehensive and confusing everyday sense may easily impress one as a 'hopeless amalgam' (Chomsky 1992: 102). It seems to involve so many 'complex and obscure sociopolitical, historical, cultural and normative-teleological elements' (Chomsky 1992: ibid.), that in its stunning complexity it might strike one as impossible to study altogether, its investigation 'verge[ing . . .] on the "study of everything"' (Chomsky 1992: ibid.). In short, principled distinctions need to be made and clear research strategies established. Otherwise no two scholars can be even sure whether they are studying the same thing when they say they are studying language, nor will they be able to agree what the phenomena they are observing and possibly describing should be taken as evidence of.

Defining strategies of investigation before one has a good understanding of one's subject is a delicate matter, of course, and there are no general and reliable guidelines for doing so. More often than not one has to rely on trial and error. This is as true of everyday life as of academic research, and given the many different manifestations in which language comes, it is not altogether surprising that language scholars should have developed a variety of sometimes quite different strategies in order to tackle the phenomenon. This is not merely because there simply *are* a large number of possible approaches to language, of course, but also because there exist a large number of *reasons* for studying language, each of them suggesting a different order of research priorities. If one is interested in, say, 'the German language' because one wants to teach 'it' to native speakers of English, the detailed manner in which human mind/brains manage to parse speech chains and attribute syntactic structure to them is arguably of little immediate interest. It will suffice to know, for instance, that in German direct objects can occur before verbs, while in English they normally cannot. Not only can the essentials of this difference be usually taught to learners without worrying about how human minds manage to identify 'direct objects' in the first place, but dwelling on that problem might even impede efficient instruction. The situation will be completely different, on the other hand, if one is looking for an explanation of syntactic speech disorders in native speakers of German. When one faces that problem, the mental or even the neurological status of syntactic categories will be of the utmost importance. In short, the question 'What is language?' seems to justify different answers depending on who wants to know and why. That the academic community of language scholars at the

beginning of the twenty-first century is rather heterogeneous is therefore indeed no surprise.

This is not the place for scientific historiography nor for a detailed survey of the scientific approaches to language that presently exist. It is important to point out, however, that within the academic community of today, language is not only approached for a variety of different purposes, and from a variety of different perspectives, but is conceptualised by different 'theoretical camps' in ways that are sometimes mutually exclusive and often incompatible. There are still many fundamental aspects of language, about which there is no full agreement among linguists. Yet, although language in all its facets is still far from being fully understood, many scholars have tended to elevate to the rank of 'theories of language' their often rather preliminary assumptions simply because they have apparently allowed them to come to terms with those particular aspects of language they happened to be interested in. Few admit to the incompleteness and the provisional character of their conceptual frameworks. Instead linguists of various persuasions tend to be quite 'defensive' about their individual approaches, and consequently fail to keep them open and flexible enough for integrating insights gained from different perspectives. Therefore, instead of contributing to what might eventually grow into a general theory of language worthy of the name, various linguistic schools work in parallel, while failing to trade insights in a mutually profitable way.

This book does *not* address a specific sub-community of linguists, nor does it expect its readers to share a set of specific assumptions about language. Given the heterogeneity of the linguistic community, I am aware that this is somewhat risky. First, issues will necessarily be raised which some informed readers may regard as settled, solved or at least handled better within their preferred frameworks. Secondly, some of the phenomena I shall refer to in order to develop my argument have been dealt with in much greater depth by other linguists and my own treatment of them may strike some as naive and superficial in comparison. Finally, the very explicitness and transparency which is required if one wishes to be understood by more colleagues than just one's closest research associates, will make one a comparably easy target of both friendly and unfriendly criticism.

I am willing to take that risk, however. From my own experience, I have learnt that there are dangers to specialisation as well. When one chooses a particular approach, adopts a particular theoretical framework, internalises the appropriate terminologies and formalisms, and attempts to advance and refine the theory by holding it against a specific set of data one knows very well, one may certainly 'get somewhere', but often one

gets so attached to one's perspective that one becomes all but incapable of questioning its basis. Certainly, this may be socially safe. If one adopts a theory that is shared by a substantial number of colleagues, one can count on their goodwill even if only for joining their ranks. But should one's chosen approach be inherently flawed, one is unlikely to discover it that way. Therefore, I have decided quite deliberately to approach my subject matter as naively as possible. Risking reinventing one or the other wheel, I shall try to describe the motivation of the present study, the particular problems it addresses, the perspective it takes, and the assumptions it makes in considerable detail in the following sections. I will be pleased if I persuade some of my readers to follow me back to basics. Since I have no intention of 'impressing' them, or 'persuading' them of the 'ultimate correctness' of my argumentation, I shall try to make it as easy as possible for them to take issue with the points I make. My hope is that they will do so, detect all the flaws I am certain to have overlooked, and make the best of it.