

Volume 3 in the Collected Works of M. A. K. Halliday

On Language and Linguistics

M. A. K. Halliday

Edited by Jonathan Webster

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Collected Works of M. A. K. Halliday

Volume 1: *On Grammar*

Volume 2: *Linguistic Studies of Text and Discourse*

Volume 3: *On Language and Linguistics*

Volume 4: *The Language of Early Childhood*

Volume 5: *The Language of Science*

Volume 6: *Computational and Quantitative Studies*

Volume 7: *Studies in English Language*

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Volume 10: *Language and Society*

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Continuum

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PREFACE

This volume has three parts: the place of linguistics as a discipline; linguistics and language; and language as social semiotic. From the papers in this volume we find a compelling presentation of Professor M. A. K. Halliday's perspective on linguistics as the scientific study of natural language. What struck me in reading these papers was his integrity as a scientist engaged in the study of this most human of all phenomena, namely, language; his humility in the face of its potential and power; and his humanistic vision of a socially accountable linguistics, which is wholly compatible with his appreciation of the role of language in our lives as social beings.

Unlike some who in the name of science subtract out the very humanness from natural language, Professor Halliday instead provides a sound systemic basis for interpreting language as an essential part of the human experience. He sees in every act of meaning the potential for discovering the true nature of language, even and especially in the speech of children – for it is out of the mouths of babes, so to speak, that language develops and humanity evolves. Every act of meaning is an opportunity for change in language and society.

The papers in this volume also reflect Professor Halliday's sense of social responsibility for himself personally, as well as for a discipline engaged in the study of language as social semiotic. What comes across in his writings is a man with a great social conscience and strong convictions. While he makes no exaggerated claims about being able to radically transform language and society, he nevertheless sees the contribution linguists can make through achieving a better understanding of the power and potential of language for doing both good and bad.

Understanding language for all that it is rather than for how little we can make it out to be comes down to asking the right questions and having the necessary framework in place to search for answers.

Professor Halliday asks the crucial questions about language and develops the theoretical framework within which the search for answers may proceed. A highlight of this volume is a new piece from Professor Halliday, entitled “The architecture of language”, in which he focuses on the assumptions or working hypotheses that enabled him to explore – as he has in the chapters presented in this volume – important questions about how language works. Describing the underlying theme of this volume, Professor Halliday writes that it is “the exploration – and perhaps celebration! – of the awe-inspiring power of language”.

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INTRODUCTION: ON THE “ARCHITECTURE” OF HUMAN LANGUAGE

The chapters which follow will inevitably contain various assumptions about language. In some cases it will be clear how these assumptions were arrived at; this is the advantage of being able to present in a single volume papers that were written at different moments in my career, and to arrange them, by and large, in the order in which they were written. But not all the basic concepts will be made explicit in this way: partly because I never fully foregrounded them – and partly because, even when I wanted to do so, I used to think that an academic article should be like a finished garment, with all the tacking removed before it was put on display. That was a big mistake! In any case, simply by being presented in the context of a published text the organizing concepts are bound to appear as ready-made, as if they had been in place from the start and were at the controls directing my engagements with language. But they weren't; rather, they emerged as the by-product of those engagements as I struggled with particular problems – problems that arose in my own work, in literary analysis or language teaching or translation, human and mechanical; but also, increasingly, problems that were faced by other people in other disciplines and professions. The “assumptions” were more like working hypotheses that enabled me to formulate, and to begin to explore, a broad variety of questions concerning language.

But since these chapters were all written on different occasions, in response to different demands, they do not show any very consistent line of pursuit. So it seemed sensible to begin with a few observations outlining my sense of (as I used to put it) “how language works”. Not because the ideas contained are original, still less revolutionary (or “challenging”, in today's academic parlance); but because anyone coming to read these chapters is entitled to ask what sorts of things about language are being taken for granted – and even more, perhaps,

what things are **not** being taken for granted. Thus the presentation here is a compromise: I have not tried to rethink how I might have formulated the various points at other times during the four decades over which these chapters were first written, but nor have I set them out systematically in the way that I would do (and in fact have done elsewhere) if presenting them in a different context today.

1 Systems of meaning

A language is a system of meaning – a *semiotic* system. Here, as in all my writing, “semiotic” means ‘having to do with meaning (*semiosis*)’; so a system of meaning is one by which meaning is created and meanings are exchanged. Human beings use numerous semiotic systems, some simple and others very complex, some rather clearly defined and others notably fuzzy. A language is almost certainly the most complicated semiotic system we have; it is also a very fuzzy one, both in the sense that its own limits are unclear and in the sense that its internal organization is full of indeterminacy.

What other kinds of system are there? I shall assume there are three: physical, biological and social. One way to think of these is as forming an ascending order of complexity. A physical system is just that: a physical system. A biological system, on the other hand, is not just that; it is a physical system (or an assembly of physical systems) having an additional feature, let us say “life”. A social system, in turn, is an assembly of biological systems (life forms) having a further additional feature – which we might call “value”: it is what defines membership; so, an assembly of life forms with a membership hierarchy. So a social system is a system of a third order of complexity, because it is social and biological and physical. We could then think of a semiotic system as being of a fourth order of complexity, being semiotic and social and biological and physical: meaning is socially constructed, biologically activated and exchanged through physical channels.

But this picture has to be reconciled with another: that of the two orders of phenomena which make up the world which we inhabit. Here “semiotic” contrasts with “material”: phenomena of matter, and phenomena of meaning. George Williams puts it like this:

Evolutionary biologists ... work with two more or less incommensurable domains: that of information and that of matter ... These two domains will never be brought together in any kind of the sense usually implied by the term “reductionism”. You can speak of galaxies and

particles of dust in the same terms, because they both have mass and charge and length and width. You can't do that with information and matter. Information doesn't have mass or charge or length in millimetres. Likewise, matter doesn't have bytes. You can't measure so much gold in so many bytes. It doesn't have redundancy, or fidelity, or any of the other descriptors we apply to information. This dearth of shared descriptors makes matter and information two separate domains of existence, which have to be discussed separately, in their own terms.

(Williams 1995: 43)

But “information” is, I think, a special kind of meaning – the kind that can be measured (in bytes, as Williams says). Most higher-order meaning, it seems to me, cannot be measured, or at least cannot be quantified; it can sometimes be graded in terms of value. So I will prefer the opposition of “matter” and “meaning”, the realm of the material and the realm of the semiotic.

The four types of system then appear as different mixes of the semiotic and the material, ranging from physical systems, which are organizations of material phenomena, to semiotic systems, which are organizations of meaning. (I am using “semiotic” in both these taxonomic contexts, but not, I think, with any danger of ambiguity.) Biological systems are largely material – except that they are organized by genes, and at a certain point in evolution by neurons, which are semiotic phenomena; and with social systems the meaning component comes to predominate. But even semiotic systems are grounded in material processes; and on the other hand in post-Newtonian physics quantum systems are interpreted as systems of meaning. Meaning needs matter to realize it; at the same time, matter needs meaning to organize it.

Human history is a continuing interplay of the material and the semiotic, as modes of action – ways of doing and of being. The balance between the two is constantly shifting (presumably the “information society” is one in which the semiotic mode of exchange predominates over the material). This is the context in which language needs to be understood.

Of all human semiotic systems, language is the greatest source of power. Its potential is indefinitely large. We might characterize it as matching in scope all our material systems – always able to keep up with the changes in the material conditions of our existence. But putting it like that overprivileges the material: it spells a technology-driven view of the human condition. Language is not a passive reflex

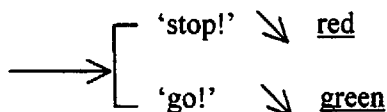
of material reality; it is an active partner in the constitution of reality, and all human processes however they are manifested, whether in our consciousness, our material frames, or in the physical world around us, are the outcome of forces which are both material and semiotic at the same time. Semiotic energy is a necessary concomitant, or complement, of material energy in bringing about changes in the world.

Whether or not language matches the scope of all other human *semiotic* systems must be left open to question. Some people claim that it does; they would say that anything that can be meant in any way at all can also be meant in language. In this view, the scope of *semantics* (the meaning potential of language) is equivalent to the whole of human semiosis. I am not so sure. Some semiotic systems may be incommensurable with language; witness the sometimes far-fetched attempts to represent the meaning of a work of art in language (but, again, cf. O'Toole 1994). But while the question is important, and deserves to be tackled much more subtly and fundamentally than this rather simplistic formulation suggests, it is not necessary for me to try and resolve it here. All that needs to be said in the present context is that other human semiotics are dependent on the premise that their users **also** have language. Language is a prerequisite; but there is no need to insist that language can mean it all.

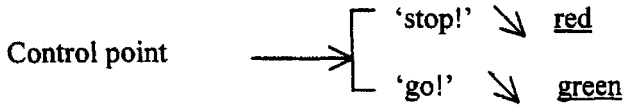
The crucial question is: how does language achieve what it does? What must language be like such that we are able to do with it all the things that we do?

2 Types of complexity in language

The simplest account of a semiotic system is as a set of *signs*, a “sign” being defined as a content/expression pair, like “red means ‘stop!’” A set of such signs is turned into a system by means of closure:



When we represent it like that we can see that it is not complete: we do not know how we get into the system. There must be a condition of entry: let us say “control point”:



This states the domain of the system. At control point, the system is entered: one or the other option must be chosen. Other than at control point, the system cannot be entered. Note that ‘control point’ is itself a semiotic feature, though no doubt realized materially, like ‘stop!’ and ‘go!’

Some semiotic systems are minimal, like this one (as presented here). A language, obviously, is not; it is vastly more complicated. The question is: how? In what ways is a language more complex than a minimal system of signs? We need to spell out the kinds of additional complexity which could transform a simple sign system into a language. The system is “thickened” along a number of different dimensions. If we posed the question in these terms, with the thought that language could be built up by expansion from a simple system of signs, we might recognize four dimensions along which such expansion would be taking place:

1. Signs may be combined, to form larger signs [syntagmatic complexity].
2. Signs may be uncoupled, to create new pairings [realizational complexity].
3. Signs may be layered, one cycling into another [stratificational complexity].
4. Signs may be networked, in relations of dependence [paradigmatic complexity].

We shall not remain within this schema – it is a builder’s perspective, rather than an architect’s; but it will serve to provide a way in.

2.1 *Signs may be combined*

We do not usually make just one meaning and stop there, like a traffic light. Meanings follow quickly one after another, each setting up a new context for the next. In this way, larger meanings are built up out of combinations of smaller ones: minimal signs – words, or even parts of words, like *I/you* realizing the contrasting roles of ‘speaker’ and ‘addressee’ in a dialogue – combine to make up larger signs, realized as a clause, or a paragraph, or an entire text like a public speech, a novel or a

scientific treatise. These are all “signs”, in the sense that they are units, or unities, of meaning.

2.2 *Signs may be uncoupled*

We are not bound by a fixed one-to-one mapping between a content and an expression. A given content may come to be realized by a different expression, or a given expression may realize a new content; and in this way new signs are being created, since variation of this kind tends to open up new meanings – new pairings are unlikely to take on if they are not in some way expanding the total resource. Then, putting this feature together with the last means that the domain of the content is not limited by the form of the expression: thus, in English, the content ‘POLARITY: positive/negative’ is typically realized as a small fragment attached to a word, the *n’t* in *did/didn’t*; but its domain is an entire clause.

2.3 *Signs may be layered*

We are not restricted to a single semiotic cycle. The expression of one content comes to be, at the same time, the content of another expression. So, for example, in English the content ‘RESPONSE POLARITY: negative’ is realized by the expression *no*; the content *no* is realized by the expression /alveolar nasal consonant + half-close back rounded vowel/(or some other vowel, according to the dialect). How many cycles of content + expression we need to recognize is in the last resort a theoretical decision; but there must be at least these two: (i) meaning to wording, (ii) wording to sound.

2.4 *Signs may be networked*

We do not construct meaning out of sign systems that are unrelated to each other. Systems are organized together in the form of networks, in such a way that some are dependent on others for their condition of entry. To come back to the traffic lights: there may be a set of options ‘keep straight’/‘turn left’/‘turn right’: but if so, this is obviously dependent on selecting the option ‘go!’ at ‘control point’; the feature ‘go!’ becomes the entry condition to this further option. Some sets of options, on the other hand, may share the same entry condition but be independent of each other. It is this organization in system networks that makes it possible for a language to expand its meaning potential more or less indefinitely.

When we observe the way very small children develop their powers of meaning, we can see all these different kinds of complexity emerging. Children’s first language-like semiotic system, which I labelled “protolanguage” when I observed and described it thirty years ago, begins as a collection of simple signs. These signs soon come to be organized into minimal systems, like ‘I want’/‘I don’t want’; and these show the beginning of further organization in clusters, on a functional basis; but they are not yet combined, nor are they yet layered or uncoupled. All these types of complexity, including the network, develop together as the necessary condition for the move from protolanguage to mother tongue. Not that they have somehow to be put in place in advance, as this formulation might imply; rather, they are essential features of our evolved human semiotic, and children take them up as they come to construe language in its new, post-infancy form.

It is through this “thickening” of its meaning-making resources that human language has evolved. What has been called the “architecture” of language is the organization of these resources within a space defined by a small number of interrelated vectors, those of stratification, metafunction, and the two compositional axes (syntagmatic and paradigmatic); all, in turn, predicated on the vector of instantiation (the relation between an instance and the system that lies behind it) which is based on memory and is a feature of all systematic behaviour. In some ways “architecture” is a misleading metaphor, because it is too static; if we want a spatial metaphor of this kind we might perhaps think more in terms of town planning, with its conception of a spatial layout defined by the movement of people, or “traffic flow”. The organization of language is likewise defined by the movement of meanings, or *discourse flow* (I use this term in preference to “information flow” for various reasons, one of which was mentioned in Section 1 above). In the remainder of this chapter I shall try to sketch in this organizational framework, especially those aspects of it which are most relevant to the discussion in the chapters that follow.

3 Paradigmatic composition: how big is a language?

This is a question that seems to be seldom asked. I first asked myself this question when I became a language teacher, teaching Chinese to members of the British armed services; I wanted to have some idea of the scale of the task that is faced by someone learning a foreign language

– a task which seemed to me remarkably ill-defined. Then the same question arose for me some years later, when I started working in computational linguistics (which at that time, in the mid-1950s, was conceptualized solely as machine translation). It seemed to me that the computer had to become a meaning machine, and so needed to model a language in the form of a meaning potential; yet we still had no informed idea of the size of the job.

The nearest anyone came to spelling this out was by counting the number of words listed in a dictionary. But meaning was not made of words; it was construed in grammar as much as in vocabulary, and even if we could assess the quantity of words the learners knew it would give little indication of what they could do in the language. By the same token, the idea that a machine translation program consisted largely of a bi- or multi-lingual dictionary was not going to take us very far.

Typically in linguistics the paradigmatic dimension has been reduced to the syntagmatic: that is to say, sets of items (usually words) have been assigned to classes on the grounds that they occur at the same place in the syntagm – represented as a linear string or, more abstractly, as a structural configuration. This is, of course, an essential component in the overall organization of the system. But meaning is choice: selecting among options that arise in the environment of other options; and the power of a language resides in its organization as a huge network of interrelated choices. These can be represented in the form of **system networks** (from which “systemic theory” gets its name). In a system network, what is being modelled is the **meaning potential** of the overall system of a language, irrespective of how or where in the syntagm the meanings happen to be located.

Represented graphically, the system network has a horizontal and a vertical dimension. For example:

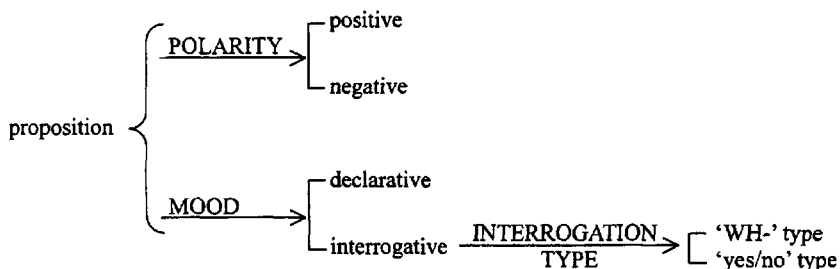


Figure 1

The vertical dimension represents combinatorial possibility: if you choose "proposition", you select simultaneously for POLARITY and for MOOD. There is no ordering on this vertical axis; systems related along this dimension are freely associated and it does not matter in which order the systems themselves, or their terms (features) are set out. The horizontal dimension, on the other hand, is ordered in *delicacy*, whereby entry into one choice depends on another, or on more than one other. Interpreted procedurally (as in a text generation program), the output feature of one system becomes the input feature to another: 'if you select "interrogative", then choose either "'WH-' type" or "'yes/no' type".' A *selection expression* is the set of all the features chosen in one pass through the network; this is the *systemic description* of the type – clause type, group type etc. – in question.

The most general options, at this level (the stratum of *lexicogrammar*), are those that we recognize readily as grammatical systems: small, closed sets of contrasting features which are implicated in very large numbers of instances, like POLARITY (positive/negative), MOOD (indicative/imperative), TRANSITIVITY (types of process: material/semiotic/relational), TENSE (time relative to some reference point: past/present/future) and so on. Systems of this kind, exemplified here from English, are central to the organization of meaning in every language.

By contrast, we think of lexical items as occurring in ill-defined, open sets with highly specific discursive domains; and so, in fact, they do. But they are not different in kind. They simply occupy the more delicate regions of one continuous lexicogrammatical space; and they can be networked in the same way as grammatical systems. But the systemic organization of the vocabulary is in terms not of lexical **items** (words) but of lexical **features** (see for example Hasan's (1985) study of the field of lending and borrowing in English). In other words, those regions of the meaning potential that are crafted lexically are organized in networks of more or less domain-specific features; certain of the combinatorial possibilities are taken up – that is, are represented by words, or *lexicalized* – while others are not. We become aware of such disjunctions when we find ourselves asking 'why isn't there a word for ...?' (for instance, why isn't there a word for 'wheeled vehicle' in English?).

The power of language comes from its paradigmatic complexity. This is its "meaning potential". So to explore the question 'how big is a language?', we model it paradigmatically: not as an inventory of structures but as a network of systems (this follows Firth's theoretical distinction between system and structure). A *system network* is a means of theorizing

the meaning potential of a semiotic system and displaying where any part of it is located within the total semiotic space. It is designed to offer an overview – a comprehensive picture covering a language as a whole.

Comprehensive in coverage; but not exhaustive in depth of detail (delicacy). There is in fact no objective criterion for how far in delicacy the description should be pursued, because that would require a determinate answer to be given every time the question is asked ‘Are these two instances the same (i.e. tokens of a single type) or not?’ In practice, of course, we know that there are different occurrences of ‘the same thing’ – of a word, a phrase and so on, and we know when they arise; the best evidence for this is the evolution of writing systems, which require such decisions to be made: if two instances are written the same way, then they are (being said to be) tokens of the same type. But this also shows up the anomalies: for example, the English writing system does not mark intonation (despite the fact that it is highly grammaticalized), so clause types which are widely different in meaning when combined with different tones are treated as if they were identical. However, our networks are still some way off from reaching the degree of delicacy where such indeterminacy becomes problematic. A language will always be bigger than we are able to make it appear.

So how big **is** a language? Consider the example of a single English verb, say *take*. (We will leave aside the question whether *take* in *take medicine*, *take time*, *take a shower* etc. are or are not ‘the same word’!) This may be either finite or non-finite; let’s just consider the finite forms to start with. If the verb is finite, it selects either temporality (“primary tense”) or modality; but there are three primary tenses, past (*took*), present (*takes*) or future (*will take*) and a large number of possible modalities. To simplify the illustration we will recognize just 24 of these, organized in four systems: value: low/median/high (e.g. *may will must*); orientation: away from/to speaker (e.g. *may can*); direction: neutral/oblique (e.g. *may might*); type: probability/obligation (e.g. *that may take time/you may go*). This gives us 27 possible forms. But each of these may be either positive or negative (e.g. *took/didn’t take*); and each of these polarities may be either unmarked (e.g. *took, didn’t take*) or marked (e.g. *did take, did not take*); $4 \times 27 = 108$. Each of these may be active or passive in voice, and there are two kinds of passive, neutral/mutative (e.g. *took, was taken, got taken*); $3 \times 108 = 324$. Then, each of these may select any of twelve secondary tenses, built up serially by shifting the point in time taken as reference (e.g. *took, had taken, had been going to take, had been going to be taking*); $12 \times 324 = 3,888$.

Picking up now on the non-finite options: there are two aspects, imperfective (*taking*) or perfective (*to take*); each may be positive or negative, active or either type of passive, and with any of the 12 secondary tenses: $2 \times 2 \times 3 \times 12 = 144$. Adding these to the 3,888 finite variants we arrive at 4,032. But this is without taking account of any of the prosodic options, the presence or absence of contrastive focus, and, if the option 'focal' is selected, the different locations, degrees and kinds of contrast that may be chosen. These options depend on other selections (for example, the number of possible locations of contrastive focus depends on the selections of tense and voice); at a conservative estimate, they increase the potential by an order of magnitude, yielding about 40,000 possibilities in all.

There are all kinds of further wrinkles, such as the choice between two variants of the secondary future (*is going to take/is about to take*), that between formal and informal finite forms, and different informal variants (e.g. *he is not taking/he isn't taking/he's not taking*), or that between different locations of the non-finite negative (e.g. *not to have taken/to have not taken*). But this account will suffice to illustrate the point – to suggest that the meaning potential of a language is extremely large. These are all variations on one lexical verb. If there are 10,000 transitive verbs in the English language (intransitives have no voice system, so their paradigm is reduced by about two-thirds), this would give 4×10^8 possibilities in choosing a particular variant of a particular verb.

To make this a little more real, let us fabricate an example and then toy with it. Here is a possible clause with the verb *take*:

You might have been getting taken for a **ride**

The verbal group *might have been getting taken* is finite; the voice is passive, mutative; the contrast is non-focal; the modality is low value, oblique direction, orientation away from speaker, probability; and the secondary tense is present in past. Any one of these features could be varied by itself, leaving all the others constant:

you might be going to get taken [tense]
they might have been taking you [voice]
you might not/needn't have been getting taken [polarity]
you **might** have been getting taken [contrast]
you must have been getting taken [modality]

... and so on. These are all real-life alternatives; they are not picked out of the grammar book – in fact it is hard to find a grammar book which

takes note of more than a small subset, because grammarians have traditionally assumed that their paradigms must be listable. They appear in the rich and ever-creative grammar of daily life.

If we extrapolate from this one illustration, we can expect the system network of clause types in a language to run into the hundreds of millions. Such a figure might seem beyond the capacity of the human brain – or might have seemed so, until recent research came to demonstrate its extraordinary power. But this is where the concept of the system network is important (cf. the discussion in Butt 2000). There is no suggestion that the speaker selecting one out of 40,000 variants of a verb is running through and rejecting the other 39,999 (any more than in choosing a word our brains are flipping through a dictionary). The network diagram shows that in arriving at any one of these selections the speaker has traversed at the most about two dozen choice points. As Wimsatt (1986) has shown, the amount of neuro-semiotic energy that is involved in such a task is not at all forbidding; and it becomes less with each exact or approximate repetition.

I will have more to say about systemic representation of language in the final section of this chapter. First, though, I need to discuss the other aspects of the organization of language – other vectors contributing to the “thickening” process whereby language evolved to its present complex state.

4 Stratification: the layering of meaning

As I remarked earlier (Section 2), an infant’s protolanguage – the “child tongue” that children typically construe for themselves towards the end of their first year of life – consists of an inventory of simple signs. We can see how these are beginning to be “networked” along functional lines if we look at the meaning potential of Nigel or Hal or Anna at around 12 months old (Halliday 1975a; Painter 1984; Torr 1997).

All these children exchange meanings all the time with their immediate meaning groups. But whereas their parents and elder siblings talk to them in adult language – it may be modified in the form of “baby talk”, but that still has the organization of language – their own contribution is qualitatively different. Each element of their protolanguage – each sign – consists of a meaning paired with an expression (which may be sound or gesture), with no further organization – no *wording* – in between. It resembles the signs that domestic pets use in communicating with their human families (I hope it will be clear that this is not to be read as derogatory!).

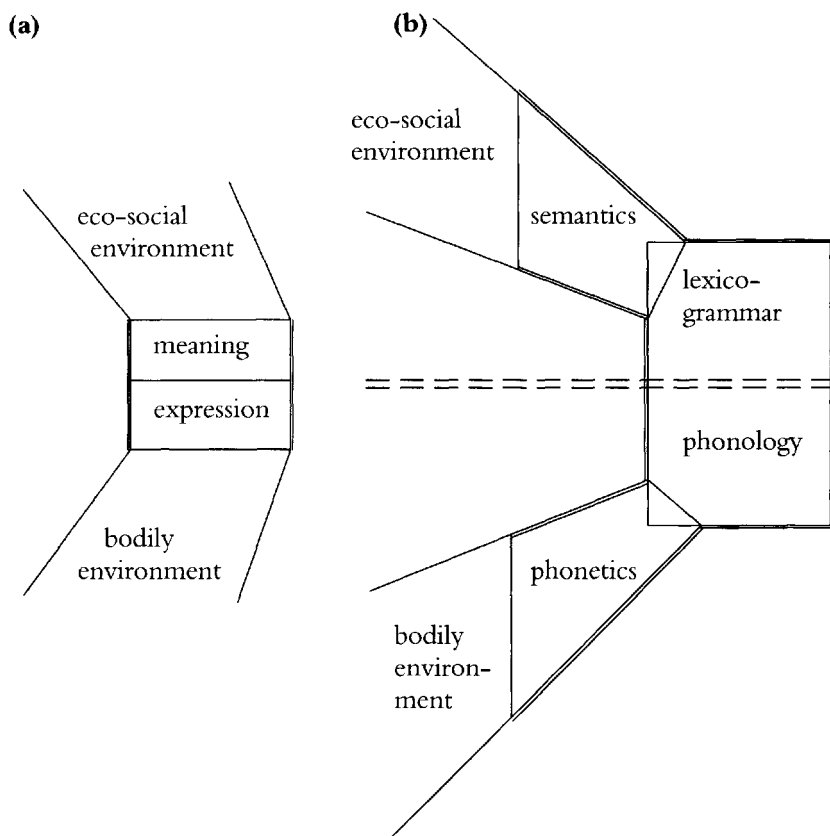


Figure 2 Protolanguage (a) and language (b), in relation to their eco-social and bodily environments

If we look back on this phase using the concepts from adult language, we will say that the protolanguage has a semantics and a phonology, but no level of grammar between the two. In other words, it is not yet *stratified*. The grammar emerges later, as the child moves from child tongue to mother tongue during the course of the second year of life. This process has been observed and described in some detail in the books referred to earlier (and cf. Halliday 1978a, 1979b, 1983; Painter 1989; Phillips 1986; Qiu 1985); my own papers on child language development will appear in Volume 4 in this series, and I will not attempt to track it any further here. Essentially, children are following the route by which human language evolved – except that as they come to walk upright they leap over hundreds of generations of evolutionary time in reconstruing their language as a

stratified semiotic system. The question is, what do they achieve by this forward leap?

If I may borrow an expression from Gerald Edelman, what is achieved is a release from the “tyranny of the extended present”. The move into grammar is the step from primary consciousness to higher order consciousness – again, as conceptualized by Edelman (1992; Edelman and Tononi 2000). Higher-order consciousness is the form of consciousness in which semiosis is organized around the stratum of lexicogrammar.

When our primary semiotic evolved into a higher-order semiotic (that is, when protolanguage evolved into language), a space was created in which meanings could be organized in their own terms, as a purely abstract network of interrelations. By “purely abstract” I mean not interfacing directly with the ecosocial environment. It is this organizational space that we refer to as *lexicogrammar*. We could perhaps sum up the effect of this stratification under four headings.

In the first place, since the grammar served as a kind of interlanguage, it meant that the two facets of the (original) sign need bear no iconic resemblance to each other; the relationship could be purely conventional, thus indefinitely extending the range of “meanable” things. In the second place, it meant that the sign could be pulled apart – deconstructed – into meaning components which could then be varied independently of one another: so, the articulatory shape (consonants and vowels) might mean one thing, the sequence in which signs occurred might mean another, the prosodic colouring yet another.

In the third place, following from the first two it meant that meanings could be organized into functional orders (see next section), in such a way that every utterance included selections from all; this makes it possible for an act of meaning to be both ‘doing’ and ‘thinking’ at the same time (to incorporate both reflection and action). In the fourth place, it meant that meaning could be created on the hoof, in the course of (in fact by means of) dialogue (and later also monologue). Taken together, the effect of this evolutionary leap was to turn a closed, meaning-bearing system into an open, meaning-creating one (not just semiotic but *semogenic*).

What I have been talking about here is the stratification of the “content” facet of the original sign. Simultaneously, an analogous stratification took place in the “expression” facet. Sound displaced gesture as the primary modality, and this likewise split into two: an abstract organizational space (*phonology*) where sound is systemized to

meet up with the lexicogrammar, and speech sound as articulatory and auditory processes taking place in the human body (*phonetics*).

There is thus, across the stratal dimension as a whole, a balance between the natural and the conventional as the essential form of the relationship at each interface. Within the (original) “content” facet, the relationship between the semantics and the lexicogrammar is **typically** natural: in general, what is construed systemically in the grammar (think of primary systems like polarity, number, person, tense/aspect, mood and so on) will resonate with some feature of our experience of the ecosocial environment. Likewise in the “expression”: phonological systems usually “make sense” in terms of the way sounds are produced and heard (b : p : : d : t : : g : k : : ...). There are arbitrary elements, on both sides – as there are bound to be, because there are too many variables to allow everything to “fit”, and anyway languages change in all sorts of ways over time; but the predominance of the natural will always be preserved; otherwise the system as a whole couldn’t function.

By contrast, the frontier between the grammar and the phonology – the two facets of the original sign – is **typically** crossed in an arbitrary fashion: things which sound alike don’t mean alike, and vice versa – relatedness in sound does not match relatedness in meaning. There is no way in which *bill pill dill till gill kill* ... make up a semantically reasonable set. Again there is a minor motif the other way (various forms of sound symbolism); but the principle of conventionality is preserved. And again, it has to be, for the overall system to work.

Stratification opened up the potential for another vector in the “content” region, that of metafunction.

5 Metafunction: the grammar at work

When children learn their first language, they are doing two things at once: learning language, and learning **through** language. As they learn their mother tongue, they are at the same time using it as a tool for learning everything else. In this way language comes to define the nature of learning.

Most obviously, perhaps, when we watch small children interacting with the objects around them we can see that they are using language to construe a theoretical model of their experience. This is language in its **experiential** function; the patterns of meaning are installed in the brain and continue to expand on a vast scale as each child, in cahoots with all those around, builds up, renovates and keeps in good repair the

semiotic “reality” that provides the framework of day-to-day existence and is manifested in every moment of discourse, spoken or listened to. We should stress, I think, that the grammar is not merely **annotating** experience; it is **construing** experience – theorizing it, in the form that we call “understanding”. By the time the human child reaches adolescence, the grammar has not only put in place and managed a huge array of categories and relations, from the most specific to the most general, but it has also created analogies, whereby everything is both like and unlike everything else, from the most concrete to the most abstract realms of being; and whatever it has first construed in one way it has then gone on to deconstrue, and then reconstrue metaphorically in a different semiotic guise. All this takes up an enormous amount of semantic space.

But from the start, in the evolution of language out of protolanguage, this “construing” function has been combined with another mode of meaning, that of **enacting**: acting out the interpersonal encounters that are essential to our survival. These range all the way from the rapidly changing microencounters of daily life – most centrally, **semiotic** encounters, where we set up and maintain complex patterns of dialogue – to the more permanent institutionalized relationships that collectively constitute the social bond. This is language in its **interpersonal** function, which includes those meanings that are more onesidedly personal: expressions of attitude and appraisal, pleasure and displeasure, and other emotional states. Note that, while language can of course **talk about** these personal and interactional states and processes, its essential function in this area is to act them out.

This functional complementarity is built in to the basic architecture of human language. It appears in the view “from above”, as distinct modes of meaning – construing experience, and enacting interpersonal relationships. It appears in the view “from below”, since these two modes of meaning are typically expressed through different kinds of structure: experiential meanings as organic configurations of parts (like the Actor + Process + Goal structure of a clause); interpersonal meanings as prosodic patterns spread over variable domains (like the distinction between falling and rising intonation). Most clearly, however, it appears in the view “from round about” – that is, in the internal organization of the lexicogrammar itself. When the grammar is represented paradigmatically, as networks of interlocking systems, the networks show up like different regions of space: instead of being evenly spread across the whole, the networks form clusters, such that

within one cluster there are lots of interconnections but there is rather little association between one cluster and another.

This effect was apparent when the "Nigel grammar" (the systemic grammar of the English clause used in the Penman text generation project) was first represented in graphic form. When it had reached a little under one thousand systems, it was printed out in network format in about thirty large "tiles", which when assembled covered one entire wall of the office. The most obvious feature was that the systems bunched into a small number of large dense patches. One such patch was made up of experiential systems; another was made up of interpersonal systems. What this meant was that the meaning potential through which we construe our experience of the world (the world around us, and also the world inside ourselves) is very highly organized; and likewise, the meaning potential through which we enact our personal and social existence is very highly organized; but between the two there is comparatively little constraint. By and large, you can put any interactional "spin" on any representational content. It is this freedom, in fact, which makes both kinds of meaning possible – but only via the intercession of a third.

There was in fact a third systemic cluster: those systems concerned with organizing the clause as a message. This is an aspect of what subsequently came to be called "information flow"; but that term suggests that all meaning can be reduced to "information", so I prefer the more inclusive term "discourse flow". These are the systems which create coherent text – text that coheres within itself and with the context of situation; some of them, the thematic systems, are realized in English by the syntagmatic ordering of elements in the clause. Others are realized by a variety of non-structural devices described by Hasan and myself (1976) under the general heading of "cohesion". I labelled this third component of meaning simply the *textual*.

It turned out that one needed to recognize a fourth functional component, the *logical*; this embodies those systems which set up logical-semantic relationships between one clausal unit and another. Grammatically, they create *clause complexes*; sequences of clauses bonded together tactically (by parataxis and/or hypotaxis) into a single complex unit, the origin of what in written language became the sentence. These systems extend the experiential power of the grammar by theorizing the connection between one quantum of experience and another (note that their "logic" is grammatical logic, not formal logic, though it is the source from which formal logic is derived). Seen "from

below”, they are very different from experiential systems, because their realization is iterative rather than configurational: they form sequences of (most typically) clauses into a dynamic progression; but seen “from above” they are closest in meaning to the experiential, and there is a lot of give-and-take between the two. It was important, therefore, to be able to bring together the logical and the experiential under a single heading; this was what I referred to as the *ideational* function.

The overall meaning potential of a language, therefore, is organized by the grammar on functional lines. Not in the sense that particular instances of language use have different functions (no doubt they have, but that is a separate point), but in the sense that language evolved in these functional contexts as one aspect of the evolution of the human species; and this has determined the way the grammar is organized – it has yielded one dimension in the overall architecture of language. Since “function” here is being used in a more abstract, theoretical reading, I have found it helpful to give the term the seal of technicality, calling it by the more weighty (if etymologically suspect) term *metafunction*. This principle – the metafunctional principle – has shaped the organization of meaning in language; and (with trivial exceptions) every act of meaning embodies all three metafunctional components.

In Part 3 of Volume 1, the chapter on “Language structure and language function” described how structures deriving from experiential, interpersonal and textual metafunctions are mapped on to each other in the clause of modern English. Another chapter made the general suggestion that the metafunctions are also distinct in the types of structure by which they are typically construed. Thus while the metafunctional principle is a semogenic one, concerned with the making of meaning, it has repercussions “below”, in the form by which meaning is constructed in the grammar. It also has repercussions “above”, resonating as it does with the semiotic parameters of the context in which the discourse is located – the features characterized as *field*, *tenor* and *mode*; this is referred to at a number of points in the present chapters, and will be treated more systematically in a later volume.

6 Syntagmatic composition: parts into wholes

There is one further dimension in the organization of language to be taken account of here, and that is that of syntagmatic composition: constructing larger units out of smaller ones. This is the simplest and

most accessible form of organization for any system whether material or semiotic. The principle guiding this form of organization in language is again a functional one, that of **rank**. Units of different sizes – different ranks – have different functions within the system of a language as a whole.

The principle of rank is fundamental to the two "inner" strata, that of lexicogrammar and that of phonology. In grammar, it seems to be true of all languages that there is one rank which carries the main burden of integrating the various kinds of meaning – that is, selections in the various metafunctions – into a single frame. This is what we call the **clause**. The clause, in turn, consists of a number of elements of lower rank that present structural configurations of their own. In evolutionary terms, we can think of these smaller elements as **words**: the origin of constituency in grammar was a hierarchy of just two ranks, clause and word, with a clause consisting of one or more than one word. Again this can be observed in the language of infants as they move into the mother tongue: for example, from my observations, *man clean car* 'a man was cleaning his car'. As languages evolved this basic pattern was elaborated in a variety of different ways. English displays a variant which is fairly typical; we can model its evolution in outline, in a theoretical reconstruction, as follows.

1. Words expand to form **groups**: e.g. nominal group *a man, that tall middle-aged man*; verbal group *was cleaning, must have been going to clean*.
2. Clauses combine to form clause complexes, e.g. *he used a hosepipe and cleaned/to clean his car*.
3. Clauses contract to form prepositional **phrases**, e.g. [*he cleaned his car*] *with a hosepipe*.
4. Clauses and phrases get embedded inside (nominal) groups, e.g. *the middle-aged man who had a hosepipe/with the hosepipe*.
5. Words get compounded out of smaller units (**morphemes**), e.g. *cleaning, hosepipe*.
6. Units other than clauses combine to form their own complexes, e.g. nominal group complex *the middle-aged man and his son*, verbal group complex *was preparing to start cleaning*.
7. Groups and phrases "meet in the middle", in such a way that each can be embedded inside the other, e.g. *the car outside the gate of the house with the green roof*

We thus arrive at a typical "rank scale" for the grammar of a language, something like the following:

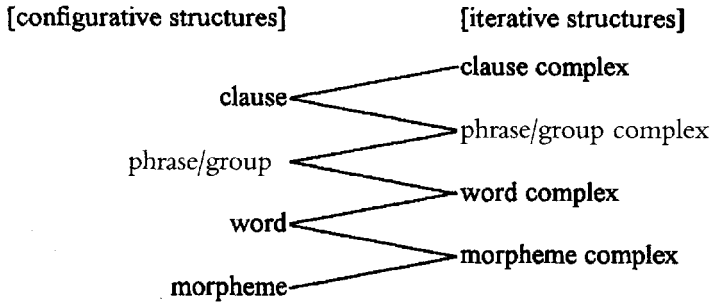


Figure 3

This enables us to model syntagmatic composition in theoretical terms. Every text consists exhaustively of (i) configurations and (ii) iterations, at each rank, with the limiting case of one element at each structural node. We can then express the “output” of any systemic feature in terms of the contribution it makes to the functional organization of the syntagm – to the *structure*.

It is helpful to distinguish terminologically between a syntagm and a structure, making a distinction that is analogous to that between a paradigm and a system. A syntagm is a linear string of classes, like “nominal group + verbal group + prepositional phrase”, “free clause + dependent clause”. A structure is an ordered (non-linear) set of functions, like “Process · Medium · Manner” or “Outcome · Cause”. There is, of course, no bi-unique relation between syntagms and structures – if there was, we should not need to recognize the two as different orders of abstraction.

But, equally clearly, the relationship between them is not random. A functional element “Process” is likely to appear in the syntagm as a verbal group. What there is, is a relation of *congruence*.

7 Congruent and metaphorical modes of meaning

The principle of congruence depends on the association among the three dimensions of rank, metafunction and stratification. It is important because of the potential for departing from it, which is a way of adding to the overall meaning potential.

Departing from the congruent is what we refer to as *metaphor*. Metaphor is an inherent property of higher-order semiotic systems, and a powerful meaning-making resource.

Let us set up a familiar example of a realizational chain as we find it operating in English. Come back once again to the child's observation *man clean car*. Semantically, in its experiential mode, this is a *figure*; more specifically, it is a figure of "doing" with a process 'clean', a doer 'man' and a done-to 'car'. This construes one particular instance in the child's experience in such a way as to relate it to a large variety of other instances. Grammatically, the figure is realized by a clause; we can describe it as a selection expression having a number of systemic features including material, effective, doing, dispositive, ... ; this particular combination of features is realized by the structural configuration Actor · Process · Goal; the Process is realized in the syntagm as a verbal group; the two participants, Actor and Goal, by nominal groups; and the relationship among them by their arrangement in this particular linear sequence. The groups, in turn, have their own distinct sets of features, also with their chains of realization which could be followed through in analogous ways.

Each link in this realizational chain exemplifies the way the grammar is first developed by children learning English as their mother tongue. The child who produced this particular utterance, at twenty-one months of age, was heading rapidly along the path of transition from protolanguage to post-infancy, adult-like language. By the same token, this is also the pattern in which the language itself first evolved. It is this primary pattern of realization that is being referred to as "congruent". Congruent relations are those that are evolutionarily and developmentally prior, both in the construal of experience (as illustrated here) and in the enacting of interpersonal relationships.

This pattern is a powerful resource with which children make sense of their experience, theorizing it in terms of categories and their relations. The grammar sets up proportionalities which create multiple analogies – numerous and varied dimensions along which different phenomena can be construed as being alike. But its semogenic power is vastly increased when any of these links can be severed and a different chain of realization can be constructed. In time the child will learn wordings such a *give the car a good clean*, *a well-cleaned car*, *the cleaning of the car*, *car-cleaning materials*, *a carclean* (or at least a *carwash*), and so on.

All these depart in some way from the congruent pattern; they are all to a certain degree metaphorical. The process of metaphor is one of **reconstruing** the patterns of realization in a language – particularly at the interface between the grammar and the semantics. A meaning that was originally construed by one kind of wording comes instead to be construed by another. So, for example, processes are congruently

construed as verbs; in a *carwash*, however, a process is realized instead in the form of a noun. But nouns congruently construe entities, not processes; so something that started off as a ‘doing’, namely *wash*, is being reconstrued as if it was a ‘thing’.

In calling this “metaphor” I am not indulging in any fancy neologism. I am simply extending the scope of the term from the lexis into the grammar, so that what is being “shifted” is not a specific word – a lexical item – but a word **class**; and I am looking at it from the perspective opposite to that which is traditionally adopted in the discussion of metaphor: instead of saying “this wording has been shifted to express a different meaning” (i.e. same expression, different content), I am saying “this meaning has been expressed by a different wording” (same content, different expression). We can represent this as in Figures 4 and 5.

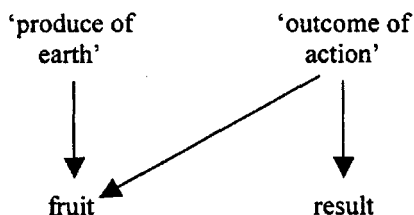


Figure 4 Lexical metaphor

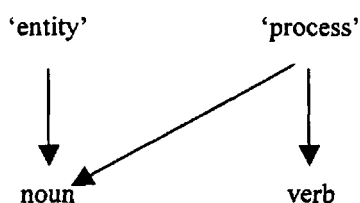


Figure 5 Grammatical metaphor

The point is, however, that it is no longer the same meaning. If a process (congruently realized by a verb) is reconstrued in the grammar as a noun (which congruently realizes an entity), the result is a semantic hybrid, which combines the features of ‘process’ and of ‘thing’. In an isolated instance, such as *taking the car in for a wash*, this is of no great significance. But when large areas of human experience are reconstrued wholesale, through a wide range of different metaphoric processes in the grammar, as has happened in the evolution of the languages of science, the result is dramatic. It is no exaggeration to say that grammatical metaphor is at the foundation of all scientific thought. You cannot construct a theory – that is, a designed theory, as distinct from the evolved, commonsense theory incorporated in the grammar of everyday discourse – without exploiting the power of the grammar to create new, “virtual” phenomena by using metaphoric strategies of this kind.

This domain will be explored in more detail in Volume 5 of this series.

8 Probability

Let me come back for a moment to the question of size: how big is a language? We had reached a figure of the order of half a billion different verbs. It is quite likely, of course, that any one we might generate at random, say *couldn't have been going to go **on** cringing*, or *ought **not** to have been getting telephoned*, has never before been either spoken or written; but it is still part of the meaning potential of the language. To put this in perspective: adults conversing steadily in English would be likely to use between 1,000 and 2,000 verbs in an hour; taking the lower figure, that would mean that half a billion occurrences (instances) would need about half a million hours of conversation. Now, if we collected half a billion clauses of natural speech (not inconceivable today), and processed it (still a little way off!), we would probably find that about half of them had one of the verbs *be*, *have* or *do*. We already know a good deal about the relative frequencies of lexical items, and something about those of the most general grammatical systems: for example, the negative will account for about 10 per cent of the total, the rest being positive; about 90 per cent of finite verbs will have primary tense or modality only, with no secondary tense, and within those having primary tense the past and present will account for over 45 per cent each, the future about 5–10 per cent. So if we combine the relative frequency of the verb *cringe* with the relative frequency of the grammatical features selected in that example above, we could work out how much natural conversation we would have to process before it became more likely than not that such a form would occur. And it would be a very large amount.

These issues will be brought up in Volume 6 of this series. The point here is, that these quantitative features are not empty curiosities. They are an inherent part of the meaning potential of a language. An important aspect of the meaning of negative is that it is significantly less likely than positive; it takes up considerably more grammatical energy, so to speak. The frequencies that we observe in a large corpus represent the systemic probabilities of the language; and the full representation of a system network ought to include the probability attached to each option in each of the principal systems (the figure becomes less

meaningful as we move into systems of greater delicacy, because the entry condition of the choice becomes too restrictive). We have not yet got the evidence to do this; but until it can be done, grammars will not have come of age.

What this is saying is that, to give a realistic estimate of the meaning potential of a language – of its semiotic power – we need to include not only the options in meaning that are available but also the relative contribution that each of these options makes. We take a step in this direction when we locate the options in system networks, according to their entry conditions: a system way down in the delicacy scale will have a relatively small domain of operation (for example, clausal substitute polarity transfer in English, as in *I think not/I don't think so*, which figures only in a certain type of projected clause nexus). But the relative contribution to the meaning potential also depends on these quantitative factors: a system whose options are very skew makes less contribution than one whose options are more or less equiprobable; and a system that is accessed only via a chain of low probability options makes less contribution than one that is accessed in a majority of selectional environments. Thus semiotic power is not simply a product of the number of choices in meaning that are available; their different quantitative profiles affect their semogenic potential – and therefore affect the meaning potential of the linguistic system as a whole.

Finally, we do not yet know how many systems it takes, on the average, to generate a given number of selection expressions. In other words, we do not know what is a typical degree of association among systems having a common point of origin – say, the systems of the English clause. The estimate given earlier of the total number of possible verbal groups did take account of the interdependence among the various systems; as already remarked, that network is unusual in the degree of freedom the various systems have to combine one with another – it took less than thirty systems to specify all the options available to any one verb. We can of course define the outer limits of possible association among systems. Stipulating that all systems are to be binary (they are not, of course; but it makes it easier), then given a network of n systems, (a) if all are dependent on each other (i.e. they form a strict taxonomy), there will be $n + 1$ possible selection expressions; whereas (b) if all are independent, the number of possible selection expressions will be 2^n . Compare four systems associated as in (a) and as in (b) in Figure 6.

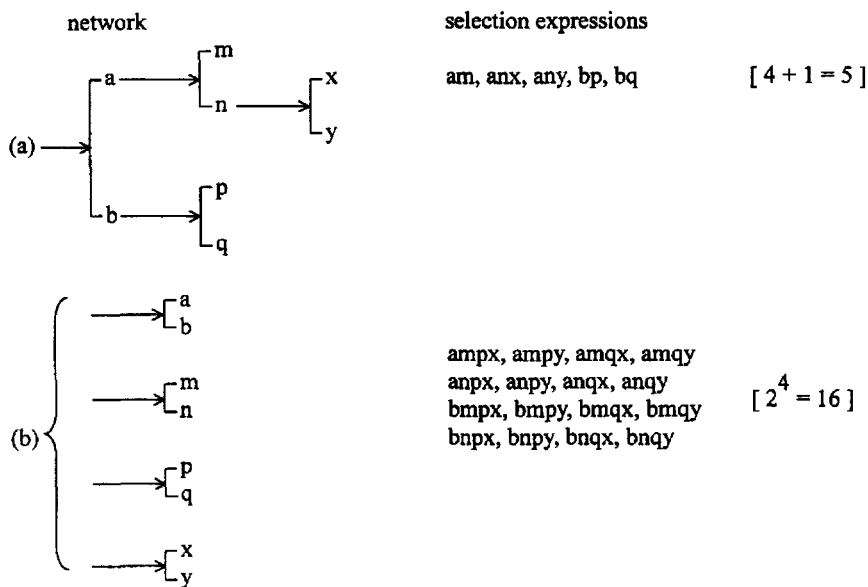


Figure 6

The networks written for the two major text generation projects in English that have used systemic grammar – the NIGEL grammar developed by Christian Matthiessen for William Mann's PENMAN project at the University of Southern California, and Robin Fawcett's GENESYS grammar used in his COMMUNAL project at Cardiff University – each had of the order of a thousand systems. Clearly they did not specify anything like two to the thousandth different selection expressions! The more systems there are in a network, the more densely they will be associated. When I wrote the prototype NIGEL grammar, consisting of 81 systems of the clause, Mann's off-the-cuff estimate was that it defined between half a billion and a billion selection expressions. This seems reasonable.

But such figures don't really matter, because we are far from being able to measure the size of a language in any meaningful way. All we can say is that a language is a vast, open-ended system of meaning potential, constantly renewing itself in interaction with its ecosocial environment. The phenomenon of "language death", so familiar in our contemporary world where the extinction of semiotic species matches the extinction of biological species as a by-product of our relentless population growth, is one where the community of speakers is no longer able to sustain this kind of metastable adaptation, and their language as it were

closes down (see Hagège 2000). If a language no longer creates new meanings, it will not survive.

9 Instantiation, variation, fuzz

The problem for linguists (two problems, in fact; or perhaps two aspects of one and the same problem) has always been: how to observe language, and how to interpret what has been observed. In some well-known languages – those that had been “reduced to writing” – there was no shortage of observable text; it might be difficult to process large quantities of it, but at least it yielded reliable examples. The problem is that it is in spoken language, especially in spontaneous dialogue, that the meaning potential of language is most richly explored and expanded; and until the age of tape recorders it was very hard to get hold of that. (And now that it has become relatively easy, for many of us the process has become so hedged around with legal restraints on invasions of privacy that we are almost back where we started!) But the second major technical advance, the computer, transformed the situation by making it possible to process large quantities of data; and meanwhile parsing programs are slowly being developed which enable us to recognize mechanically some of the principal grammatical patterns for large-scale quantitative analysis.

The second part of the problem is no less intractable: this concerns the relationship between what is observed and the systemic principles that lie behind. Another way of formulating this is to say that it concerns the nature of a semiotic fact. In fact the two parts of the problem probably have to be solved together, as they were in physics by the efforts of Galileo and Newton (and of the age in which they were both able to flourish). Before their time, when technology had not yet evolved to permit accurate observation and experiment, even advanced thinkers such as Roger Bacon, who were aware of the need to experiment and observe, could still not formulate adequately the relationship between observation and theory. This relationship is complex enough with phenomena of matter; it is much more complex with phenomena of meaning; in that respect, twentieth-century linguistics was more or less where physics had been back in the sixteenth century.

Physical processes could be measured, and that gave rise to a rather clear conception of a physical theory: it was one formulated in terms of mathematics. Mathematics made it possible to predict physical

outcomes; it became an essential component of physics, but at the same time continued to have a life of its own, eventually reconstituting our entire view of the nature of the physical universe. Semiotic processes cannot be measured (or only a small subset of them can); and they cannot be observed to make predictions, at least not in the Newtonian sense. (This is the inherent contradiction in the idea of a "human science", as long as science is defined in that limiting way.) What we observe in semiotic processes are instantiations of an underlying potential. This formulation could also apply to physical systems: we observe instances of "weather", and these instantiate an underlying potential we call "climate". But the predictions that follow from our observations are not about tomorrow's meanings. They are about statistical effects; and they tell us, for example, that in English the most common fifty verbs will account for 90 per cent of all verb occurrences, that active verbs will be about ten times more frequent than passive verbs, and so on. The larger the sample of texts, the more closely the actual frequencies will approximate to these predictions – provided the scale of the observations has been adequate in the first place; and the predictions may be able to take account of functional variation, showing how the proportions may vary around the overall (unconditioned) values if they relate specifically to one or another particular register.

These statistical properties of language are critical to the way language is learnt and the way language is used. When children learn their mother tongue, they are sensitive to relative frequencies: they learn the more common options before the rarer ones, and gradually approximate to the frequency patterns of the discourse they hear around them. As mature speakers, listening and reading, we are all the time expecting what might be to come; and we use quantitative evidence when switching in to the appropriate functional variety. In learning a foreign language we tend to transfer the probabilities from some language we know already – not always with the right result. So when as grammarians we try to explain how a language functions as a semogenic resource, we want to find out how it manages its quantitative effects.

At the same time (and unlike physical systems), instances in a semiotic system carry differential value. Poets, scientists, statesmen often produce instances of text that turn out to be significant events in their own right, not only perturbing the evolving system of the language but sometimes even affecting the course of history. These contrast notably with the "innumerable small momenta" of run-of-the-

mill instances in daily life, which are what bring about the typical processes of gradual linguistic change. The particular impact between such a highly valued semiotic instance and the events surrounding it, both semiotic and material, is something we still need to understand, in terms of the overall architecture of the linguistic system. In some way or other resonances are set up, moments of harmony and tension, within the networks of the language itself and with other meanings that are being enacted somewhere in the environment.

It helps, I think, to bear in mind that in theorizing any higher-order semiotic system we are always involved in compromise. This is partly because the categories we set up to explain how a language works are almost all inherently fuzzy. Some contrasts in meaning are continuous (for example, in English, the systemic differences between different angles of falling pitch movement); but even apparently discrete categories like the grammatical classes of verb, noun, and so on, are highly indeterminate: there are core members, with close to 100 per cent probability of membership, and there are stragglers at the outer fringes, whose membership is at a much lower degree of likelihood and may be dependent on contextual variables. Whether we are considering highly abstract features, such as the degree of association among grammatical systems (modelled in our networks as either/or – either dependent or independent – but in fact needing to be graded once we have the data from the corpus), or the meanings of individual lexical items, such indeterminacy is a positive and essential characteristic: it is this which gives a semiotic system the necessary “play” without which it would freeze up and collapse in on itself.

But the need for compromise also arises as a consequence of stratification, because the stratal organization of the system opens up several different perspectives. Suppose we are focusing on the lexicogrammar, as the powerhouse of language where meaning is construed – sorted out along the continuum from the grammatical (very general meanings associated with almost any domain) to the lexical (very specific meanings associated with particular domains). We may view any phenomenon along this continuum – any aspect of the *wording* – “from above”, asking what meanings are being construed by this wording; or we may look at it “from below”, asking how this wording is realized as a syntagm. The analogies that appear in these two contrasting perspectives typically do not match: what goes together when seen from above is not the same as what goes together when seen from below. And there is also the view “from around about”: what goes

with what inside the grammar itself, the patterns of agnation as revealed in the system network. Any of these perspectives may be given prominence. What is called “functional linguistics” means privileging the view from above; but whatever perspective is favoured the resulting account involves compromise – most of all, of course, if one tries to give equal weight to all three. This “metacompromise” by the grammarian is both model and metaphor for the compromise that is a central feature of the grammar itself, whose theorizing of the human condition is nothing more than a massive reconciliation of conflicting principles of order – this being the only way of “semioticing” our complex ecosocial environment in a way that is favourable to our survival.

In other words, the all-round thickening of language, its multi-dimensional “architecture”, reflects the multidimensional nature of human experience and interpersonal relationships. If the processes whereby we interact with the ecosocial environment are now so exceedingly complex, then any system which transforms these processes into meaning – which *semioticizes* them – is bound to evolve analogous degrees and kinds of complexity. Language is as it is because of what it has evolved to do. The underlying theme of the chapters which follow is the exploration – and perhaps celebration! – of the awe-inspiring power of language. Different languages differ, of course, as regards what, and how much, is demanded of them; this is a manifestation of the variety of human culture. But all languages have the **potential** to meet any demands that their speakers may contrive to make of them.

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PART ONE

**THE PLACE OF LINGUISTICS
AS A DISCIPLINE**

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EDITOR'S INTRODUCTION

In the first paper in this section, "Syntax and the consumer", originally presented in April 1964 at the Fifteenth Annual Round Table Meeting on Linguistics and Language Studies, Professor Halliday makes the point that "the features of a description, and therefore of the model that lies behind it, are relatable to the aims of the model and through these to particular applications of linguistics". Halliday characterizes his own work as aiming "to show the patterns inherent in the linguistic performance of the native speaker". One of the requirements for such exploration into 'how the language works' is "a general description of those patterns which the linguist considers to be primary in language, a description which is then variably extendable, on the 'scale of delicacy', in depth of detail". The concept of delicacy "proves useful in providing a means whereby the linguist analysing a text can select a point beyond which he takes account of no further distinctions and can specify the type of relation between the different systems in which he is interested". The expectation being that textually oriented studies – involving "a characterization of the special features, including statistical properties, of varieties of the language used for different purposes ('registers'), and the comparison of individual texts, spoken and written, including literary texts" – should contribute to "literary scholarship, native and foreign language teaching, educational research, sociological and anthropological studies and medical applications".

The next three papers in this section were originally delivered as open lectures, spanning the decade from 1967–77. They were later published together by the Applied Linguistics Association of Australia (1977). "Grammar, Society and the Noun" was first presented in 1967 on the occasion of the inauguration of the Department of Linguistics at University College London; "The Context of Linguistics" was given at a Georgetown University Round Table Meeting (1975); and "Ideas about Language" celebrated the foundation of the Linguistics

Department at the University of Sydney. The three papers are intended to “contribute towards some kind of a picture of the place of linguistics in contemporary scholarship, and of the relevance it has – or could have – to the life of the community”. The linguist’s ability to relate language, mind and society, to understand the role of language as both mediator and metaphor, rests on “a sound interpretation of language as a system”, which can only be achieved “when we set out to answer questions that have arisen in an attempt to interpret language in the broadest context of its place in human society”. Halliday argues for greater ‘social accountability’ in linguistics, not simply in terms of “satisfying our own individual consciences”, but rather “in eliminating some of the artificial disciplinary boundaries ... which hamper intellectual development, and induce both overspecialization and underapplication”. To say that one is discussing ideas about language, “should not be thought to suggest that these ideas are isolated from ideas about everything else”, nor should it be just about language as we choose to define it, ignoring everyone else’s idea of language. Arguing against keeping the discussion as a private conversation within a single discipline, Halliday urges linguists “not to absent themselves from the dialogue of disciplines”, warning that “if they do, the study of language will simply go on without them”.

Natural language is a dynamic open system, “an evolved system, not a designed system: not something separate from humanity, but an essential part of the condition of being human”. It is the means by which “we construct the microcosmos in which each one of us lives, our little universes of doing and happening, and the people and the things that are involved therein”. When language came to be written down, there entered an element of design into the ‘distinctively human semiotic’, creating a new theory of experience, a new ‘grammar’. This complementarity between speech and writing and its impact on our ways of knowing and learning is explored in “Language and the order of nature”, which appeared in an edited volume entitled *The Linguistics of Writing* (1987).

The problems facing humankind, such as classism, growthism, destruction of the species, pollution, are not just problems for biologists and physicists, argues Professor Halliday, “They are problems for the applied linguistic community as well. I do not suggest for one moment that we hold the key. But we ought to be able to write the instructions for its use.” This challenge comes from a paper first read to the Ninth World Congress of Applied Linguistics, Thessaloniki, Greece, and

subsequently published in *Journal of Applied Linguistics* (1990), “New ways of meaning: the challenge to applied linguistics”. Ways of meaning are a significant component in historical upheavals. The introduction of writing, for example, and its corresponding grammatical construction of reality, marked the shift from hunting and gathering to pastoral and agricultural practices. Language likewise participated in the shaping of other such major upheavals as the ‘iron age’ of classical Greece, India and China; the ‘renaissance’ leading up to the industrial revolution; and the present age of information. This comes about because “language is at the same time a part of reality, a shaper of reality, and a metaphor for reality”. Interpreting the grammatical construction of reality is the task for applied linguistics. As Professor Halliday explains, “We cannot transform language; it is the people’s acts of meaning that do that. But we can observe these acts of meaning as they happen around us and try to chart the currents and patterns of change.”

Chapter One

SYNTAX AND THE CONSUMER (1964)

At the Seventh Annual Round Table Meeting, held at the Institute of Languages and Linguistics in 1956, Professor Archibald Hill read a paper entitled 'Who needs linguistics?' In it he referred to "the kinds of people who can now be shown to be in need of linguistic knowledge for practical reasons", including among them teachers of foreign languages and of the native language, literary scholars and those concerned with the study of mental disorders. His concluding paragraph contained the words "It is the linguists who need linguistics. ... It is we who have the task of making linguistics sufficiently adult, and its results sufficiently available so that all people of good will, who work within the field of language, language art, and language usage, can realize that there are techniques and results which are of value to them."

Professor Hill could, if he had wished, have added others to the list; what he was emphasizing, as I understand it, was that any benefits which those other than the linguists themselves may derive from linguistic work depends on the linguists' own pursuit and presentation of their subject. Within those areas of activity, often referred to as "applied linguistics", in which languages are described for other than purely explanatory purposes, the linguist's task is that of describing language; and he will not, for example, attempt to tell the language teacher what to teach or how to teach it, nor claim to be a pediatrician because his work may contribute to studies of language development in children.

While recognizing the limitations on their own role, however, linguists are not unaware of the needs of the consumer. Language may be described for a wide range of purposes; or, if that is begging the question I want to

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