Chapter Twelve

SPOKEN AND WRITTEN MODES
OF MEANING (1987)

1 Spoken language and education

It seems to me that one of the most productive areas of discussion between linguists and educators in the past quarter century has been that of speech and the spoken language. Twenty-five years ago, when I launched the "Linguistics and English Teaching" project in London, which produced *Breakthrough to Literacy* and *Language in Use*, it was still rare to find references to the place of spoken language in school, or to the need for children to be articulate as well as literate. Dell Hymes had not yet introduced "communicative competence"; the words *oracy* and *orality* had not yet entered the field (Andrew Wilkinson's *Some Aspects of Oracy* appeared in 1967); David Abercrombie (1963) had only just published his 'Conversation and spoken prose.' ==Language, in school, as in the community at large, meant written language.==

The word *language* itself was hardly used in educational contexts. In the primary school, there was reading and writing; in the secondary school there was English, which meant literature and composition. Not that a classroom was a temple of silence: but the kind of spoken language that had a place, once a pupil had got beyond the infant school, was prepared speech: reading aloud, drama, debating – language that was written in order to be spoken, or at least was closely monitored in the course of its production. Spoken language in its natural form, spontaneous and unselfconscious, was not taken seriously as a medium of learning.

Among linguists, by contrast, the spoken language had pride of place. One learnt in the first year of a linguistics course that speech was logically and historically prior to writing. The somewhat aggressive tone with which linguists often proclaimed this commitment did not endear them to educators, who sensed that it undermined their authority as guardians of literacy and felt threatened by a scale of values they did not understand, according to which English spelling was out of harmony with the facts of the English language – whereas for them it was the pronunciation that was out of step, being a distorted reflection of the reality that lay in writing.

The linguists' professional commitment to the primacy of speech did not, however, arise from or carry with it an awareness of the properties of spoken discourse. It arose from the two sources of diachronic phonology (the study of sound change) and articulatory phonetics (the study of speech production), which came together in twentieth century phonological theory. This was an interpretation of the system of speech sounds and of the phonological properties of the stream of speech; it did not involve any attempt to study the grammar and semantics of spoken as distinct from written language. As early as 1911, in his discussion of functional variation in language, Mathesius (1964) was referring to "how the styles of speech are manifested in the pronuncia-tion of language, in the stock of words, and in syntax" (p. 23), and to "the influence of functional styles on the lexical and semantic aspects of speech" (p. 24); and it is clear that "speech" for him (*parole*) did encompass both spoken and written varieties. But it was not until the 1950s, with the appearance of tape recorders, that natural speech could become the object of systematic study. The notion of "spoken text" is still not easily accepted, as can be seen from the confusion that prevails when spontaneous speech is reduced to writing in order to be analysed.

Spoken language came to figure in educational discussions in the context of language in the classroom: the language used by teachers to structure, direct and monitor their students' progress through the lesson. But the emphasis was on verbal strategies rather than on the text as a document; the investigators of the fifties and early sixties were not concerned with the particular place of spoken language in the learning process. It was assumed, of course, that students learnt by listening; but the expository aspects of the teacher's language were given little atten-tion, while the notion that a student might be using his own talk as a means of learning was nowhere part of the picture. Probably it would have been felt that the principal means of learning through the spoken language was by asking questions; but studies of the early seventies (for

example the Toronto research reported in *Five to Nine*) revealed that students seldom do ask questions – not, that is, while they are occupying their student role (i.e. in class). It is the teachers that ask the questions; and when they do so, both question and answer may be somewhat removed from the patterns of natural dialogue.

2 Complexity of natural speech

Already half a century earlier Franz Boas (1911) had stressed the unconscious character of language, unique (as he saw it) among the phenomena of human culture. Boas' observation was to be understood in its contemporary context as a characterization of the language system (*langue*); not that, writing in 1911, he could have read Saussure's *Course in General Linguistics*, any more than Mathesius could have done; but the unconscious was in the air, so to speak, and playing a critical role in the conception of systems as regularities underlying human behav-iour. But Boas may also have had in mind the unconsciousness of the behaviour itself: the act of speaking (*acte de parole*) as an unconscious act. The lack of conscious awareness of the underlying **system**, and the difficulty that people have in bringing it to consciousness, are things which language shares with other semiotic systems – for example, social systems like that of kinship; what is unusual about language is the extent to which even the **manifestation** of the system, the actual process of meaning, remains hidden from observation, by performer and receiver alike. In that respect talking is more like dancing, or even running, than it is like playing chess. Speaker and listeners are of course aware that the speaker is speaking; but they are typically not aware of what he is saying, and if asked to recall it, not only the listeners but also the speaker will ordinarily offer a paraphrase, something that is true to the meaning but not by any means true to the wording. To focus attention on the wording of language is something that has to be learnt – for example if you are studying linguistics; it can be a difficult and somewhat threatening task.

About 30 years ago, as a result of being asked to teach English intonation to foreign students, I began observing natural spontaneous discourse in English; and from the start I was struck by a curious fact. Not only were people unconscious of what they themselves were saying; they would often deny, not just that they **had** said something I had observed them to say, but also that they ever **could** say it. For example, I noticed the utterance *it'll've been going to've been being tested every day for the past fortnight soon*, where the verbal group *will have been*

going to have been being tested makes five serial tense choices, present in past in future in past, and is also passive. This passed quite unnoticed by both the speaker and the person it was addressed to; yet at the time it was being seriously questioned whether a simple verb form like *has been being tested*, which one can hear about once a week, could ever occur in English. Five-term tense forms are, predictably, very rare – one can in fact make a reasonable guess as to how rare, on the basis of observed frequencies of two- and three-term tense forms together with the constraints of the tense system; but they are provided for within the resources of the spoken language. Another instance I observed was *they said they'd been going to've been paying me all this time, only the funds just kept on not coming through*.

Other things I noted regularly included present in present participial non-finites like *being cooking* in *I never heard you come in – it must have been with being cooking*; marked thematic elements with reprise pronoun, as in *that poor child I couldn't get him out of my mind*; and relatives reaching into dependent clauses, such as *that's the noise which when you say it to a horse the horse goes faster*. These are all systematic features that people are unaware that they incorporate in their speech, and often deny having said even when they are pointed out; or at least reject as unsystematic – after "I didn't say it", the next line of defence is "well it was a mistake". But of course it was not a mistake; it was a regular product of the system of spoken English.

But perhaps the most unexpected feature of those early observations was the complexity of some of the sentence structures. Here are two examples from recordings made at the time:

(i) *It's very interesting, because it fairly soon is established when you're meeting with somebody what kind of conversation you're having: for example, you may know and tune in pretty quickly to the fact that you're there as the support, perhaps, in the listening capacity – that you're there, in fact, to help the other person sort their ideas; and therefore your remarks, in that particular type of conversation, are aimed at drawing out the other person, or in some way assisting them, by reflecting them, to draw their ideas out, and you may tune in to this, or you may be given this role and refuse it, refuse to accept it, which may again alter the nature of your conversation.*

(ii) *The other man who kicks is the full-back, who usually receives the ball way behind the rest of his team, either near his line or when somebody's done what the stand-off in the first example was doing, kicked over the defenders; the full-back should be able then to pick it up, and his job is*

usually to kick for touch – nearly always for touch because he's miles behind the rest of his side, and before he can do anything else with the ball he's got to run up into them, before he can pass it, because he can't pass the ball forward, and if he kicks it forward to another of his side the other man's automatically off-side.
And you get a penalty for that, do you, the other side?
Depending on whether it's kicking or passing forward. Passing forward – no, it's a scrum. If you kick it forward and somebody else picks it up that will be a penalty.
And if not, if the other side picks –
If the other side picks it up that's all right; but the trouble is this is in fact tactics again, because you don't want to put the ball into the hands of the other side if you can avoid it because it's the side that has possession, as in most games of course, is at an advantage.

Examples such as these were noteworthy in two respects. One was that they embodied patterns of parataxis (combining with equal status) and hypotaxis (combining with unequal status) between clauses which could run to considerable length and depth. The other was that they were remarkably well formed: although the speaker seemed to be running through a maze, he did not get lost, but emerged at the end with all brackets closed and all structural promises fulfilled. And this drew attention to a third property which I found interesting: that while the listeners had absorbed these passages quite unconsciously and without effort, they were difficult to follow in writing.

3 Lexical density

These two examples have been around for a long time; so let me turn to some recent specimens taken from recordings made by Guenter Plum to whom I am indebted for drawing them to my attention. In these spontaneous narratives Plum regularly finds sequences such as the following:

1A *I had to wait, I had to wait till it was born and till it got to about eight or ten weeks of age, then I bought my first dachshund, a black-and-tan bitch puppy, as they told me I should have bought a bitch puppy to start off with, because if she wasn't a hundred percent good I could choose a top champion dog to mate her to, and then produce something that was good, which would be in my own kennel prefix.*

This displays the same kind of mobility that the earlier observations had suggested was typically associated with natural, unselfconscious speech – which is what it was. I asked myself how I would have expressed this in writing, and came up with two rewordings; the first (1B) was fairly informal, as I might have told it in a letter to a friend:

1B *I had to wait till it was born and had got to about eight or ten weeks of age; that was when I bought my first dachshund, a black-and-tan bitch puppy. By all accounts I should have bought a bitch puppy at the start, because if she wasn't a hundred percent good I could mate her with a top champion dog and produce a good offspring – which would carry my own kennel prefix.*

My second rewording (1C) was a more formal written variant:

1C *Some eight or ten weeks after the birth saw my first acquisition of a dachshund, a black-and-tan bitch puppy. It seems that a bitch puppy would have been the appropriate initial purchase, because of the possibility of mating an imperfect specimen with a top champion dog, the improved offspring then carrying my own kennel prefix.*

The aim was to produce a set of related passages of text differing along one dimension, which could be recognized as going from "most likely to be spoken" to "most likely to be written". How such variation actually correlates with difference in the medium is of course problematic; the relationship is a complicated one, both because written / spoken is not a simple dichotomy – there are many mixed and intermediate types – and because the whole space taken up by such variation is by now highly coded: in any given instance the wording used is as much the product of stylistic conventions in the language as of choices made by individual speakers and writers. Here I am simply moving along a continuum which anyone familiar with English usage can readily interpret in terms of "spoken" and "written" poles.

The kind of difference that we find among these three variants is one that is often referred to as a difference of 'texture', and this familiar rhetorical metaphor is a very appropriate one: it is as if they were the product of a different weave, with fibres of a different yarn. But when we look behind these traditional metaphors, at the forms of language they are describing, we find that much of the difference can be accounted for as the effect of two related lexicosyntactic variables. The written version has a much higher lexical density; at the same time, it has a much simpler sentential structure. Let us examine these concepts in turn.

Table 1

Lexical Density of Texts 1A, 1B, and 1C

	(1) Lexical items	(2) Running words	(1:2)	(3) Clauses	(1:3)
1A	23	83	1:3.6	13	1.8:1
1B	26	68	1:2.6	8	3.3:1
1C	25	55	1:2.2	4	6.3:1

The *lexical density* is the proportion of lexical items (content words) to the total discourse. It can be measured in various ways: the ratio of lexical items either to total running words or to some higher grammatical unit, most obviously the clause; with or without weighting for relative frequency (in the language) of the lexical items themselves. Here we will ignore the relative frequency of the lexical items and refer simply to the total number in each case, providing two measures (Table 1): the number of lexical items (1) as a proportion of the number of running words, and (2) as a proportion of the number of clauses. Only non-embedded clauses have been counted (if embedded clauses are also counted, then each lexical item occurring in them is counted twice, since it figures in both the embedded and the matrix clause – i.e., both in the **part**, and in the **whole** of which it is a part). The figures are given to the nearest decimal.

As Jean Ure showed (1971), the lexical density of a text is a function of its place on a register scale which she characterized as running from most active to most reflective: the nearer to the "language-in-action" end of the scale, the lower the lexical density. Since written language is characteristically reflective rather than active, in a written text the lexical density tends to be higher; and it increases as the text becomes further away from spontaneous speech.

Jean Ure measured lexical density as a proportion of running words; but as is suggested by the figures given above, if it is calculated with reference to the number of clauses the discrepancy stands out more sharply. Thus in the example given above, we find that the number of lexical items remained fairly constant and the number of running words fell off slightly, the number of clauses fell steeply: from 13, to 8, to 4. In other words, the lexical density increases not because the number of lexical items goes up but because the number of non-lexical items –

grammatical words – goes down; and the number of clauses goes down even more.

Let us attempt a similar rewording the other way round, this time beginning with a passage of formal written English taken from *Scientific American*:

2A *Private civil actions at law have a special significance in that they provide an outlet for efforts by independent citizens. Such actions offer a means whereby the multiple initiatives of the private citizens, individually or in groups, can be brought to bear on technology assessment, the internalization of costs and environmental protection. They constitute a channel through which the diverse interests, outlooks and moods of the general public can be given expression.*
The current popular concern over the environment has stimulated private civil actions of two main types.

2B is my attempt at a somewhat less "written" version; while 2C is in another step nearer to speech:

2B *Private civil actions at law are especially significant because they can be brought by independent citizens, so enabling them to find an outlet for their efforts. By bringing these actions, either as individuals or in groups, private citizens can regularly take the initiative in assessing technology, internalizing costs and protecting the environment. Through the use of these actions as a channel, the general public are able to express all their various interests, their outlooks, and their moods.*
Because people are currently concerned about the environment, they have been bringing numerous private civil actions, which have been mainly of two types.

2C *One thing is especially significant, and that is that people should be able to bring private civil actions at law, because by doing this independent citizens can become involved. By bringing these actions, whether they are acting as individuals or in groups, private citizens can keep on taking the initiative; they can help to assess technology, they can help to internalize costs, and they can help to protect the environment. The general public, who want all kinds of different things, and who think and feel in all kinds of different ways, can express all these wants and thoughts and feelings by bringing civil actions at law.*
At present, people are concerned about the environment; so they have been bringing quite a few private civil actions, which have been mainly of two kinds.

Table 2 Lexical Density of Texts 2A, 2B, and 2C

	(1) Lexical items	(2) Running words	(1:2)	(3) Clauses	(1:3)
2A	48	87	1:1.8	5	9.6:1
2B	48	101	1:2.1	12	4.0:1
2C	51	132	1:2.6	17	3.0:1

Table 2 shows the relative lexical density of the three variants of Text 2. Again, the number of lexical items has remained fairly constant; the variation in lexical density results from the increase in the total number of words – which means, therefore, in the number of grammatical words. This, in turn, is related to the increase in the number of clauses – where, however, the discrepancy is again much more striking.

4   Grammatical intricacy

We have characterized the difference in general terms by saying that written language has a higher lexical density than spoken language; this expresses it as a positive feature of written discourse and suggests that writing is more complex, since presumably lexical density is a form of complexity. Could we then turn the formulation around, and express the difference as a positive characteristic of spoken language? To say that spoken discourse has more words in it, or even more clauses, does not seem to convey anything very significant about it. We need to look at how the words and clauses are organized.

Let us consider a shorter example of a pair of texts related in the same way, one "more written" (Text 3A), the other "more spoken" (Text 3B). I have constructed these so that they resemble the originals of Texts 1 and 2; but they are based on a natural example occurring in two texts in which a person had described the same experience twice over, once in speech and once in writing.

More "written":

3A *Every previous visit had left me with a sense of the risk to others in further attempts at action on my part.*

More "spoken":

3B *Whenever I'd visited there before I'd end up feeling that other people might get hurt if I tried to do anything more.*

The first version (3A) is one sentence, consisting of one clause: a "simple sentence" in traditional grammar. The second version (3B) consists of four clauses (assuming that *ended up feeling* and *tried to do* are each single predicators); but these too have to be transcribed as one sentence, since they are related by hypotaxis – only one has independent status. These four clauses form what is called in systemic grammar a *clause complex* (for analysis and notation see Table 3):

Table 3

Notational Conventions for the Clause Complex[a]

	Logical-semantic relations		Interdependencies	
Category		**Symbol**	**Category**	**Symbol**
expansion:	elaborating	$=$	parataxis	1 2 3 . . .
	extending	$+$	hypotaxis[b]	$\alpha\ \beta\ \gamma$ . . .
	enhancing	$\times$		
projection:	idea	$'$		
	locution	$"$		

[a] For details of analysis see Halliday (1985, pp. 192 ff).
[b] Hypotaxis is not equivalent to embedding, which is a constituency (not a "tactic") relation; see Table 4.

Whenever I'd visited there before	$\times\beta$
I'd end up feeling	$\alpha\ \alpha$
that other people might get hurt	$\alpha\ '\beta\ \alpha$
if I tried to do anything more	$\alpha\ \beta\ \times\beta$

Figure 1

The structural representation of this clause complex is given in Figure 1. The lower lexical density of Text 3B again appears clearly as a function of the number of clauses. But the significant factor is not that this text consists of four clauses where Text 3A consists of only one. It is that Text 3B consists of a *clause complex* consisting of four clauses. The clauses are not strung together as one simple sentence after another; they are syntactically related. Looked at from the point of view of the sentence structure, it is the spoken text that appears more complex than the written one. The spoken text has a lower degree of lexical density, but a higher degree of grammatical intricacy.
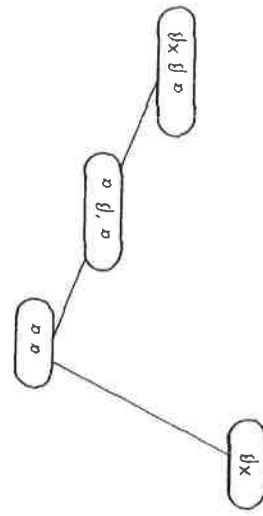
Figure 2

Let us return to Text 1, in its original spoken form (Text 1A). This consisted of 13 clauses. However, these 13 clauses were not strung out end to end; they were constructed into a small number of clause complexes of mixed paratactic and hypotactic construction: arguably just one clause complex throughout. Here is its interpretation as one clause complex:

1 1	*I had to wait*
1 =2 α	*I had to wait*
1 2 $\times\beta$ 1	*till it was born*
1 2 β +2	*and till it got to about eight or ten weeks of age*
$\times$2 α	*then I bought my first dachshund, a black-and-tan bitch puppy*
2 $\times\beta$ α	*as they told me*
2 β "β α α	*I should've bought a bitch puppy*
2 β β α $\times\beta$	*to start off with*
2 β $\times\beta$ α 1 α	*because . . .*
2 β β $\times\beta$	*if she wasn't 100% good*
2 β β β α 1 $\times\beta$	*. . . I could choose a top champion dog*
2 β β β α $\times$2 α	*to mate her to*
2 β β β α 2 +β	*and then produce something that was good*
	which would be in my own kennel prefix

Figure 3

Sequences of this kind extend to a considerable length and depth in parataxis and hypotaxis. A typical pattern is one in which both these kinds of "taxis", or interdependency, occur, with frequent alternation both between the two and also among their various subcategories, as in the example here. The relationships between successive pairs of clauses in Text 1A are set out in Table 4.

Table 4   Clause Complex Relationship In Text 1A

Clause number	Symbol	Type of interdependency	Logical-semantic relation	Marker
1–2	=2	parataxis	elaborating: repetitive	(tone concord)
2–3	×β	hypotaxis	enhancing: temporal	till
3–4	+2	parataxis	extending: additive	and
4–5	×2	parataxis	enhancing: temporal	then
5–6	×β	hypotaxis	enhancing: causal	as
6–7	"β	hypotaxis	projecting: locution	—
7–8	×β	hypotaxis	enhancing: purpose	to
8–9	×β	hypotaxis	enhancing: causal	because
9–10	×β	hypotaxis	enhancing: conditional	if
10–11	×β	hypotaxis	enhancing: purpose	to
11–12	×2	parataxis	enhancing: temporal	and then
12–13	+β	hypotaxis	extending: additive	which

Other examples from the same source but from different speakers show similar patterns; there are, obviously, individual differences (including perhaps in the preference for one or other type of interdependency), but the same free-flowing intricacy is noticeable all the time, as in Texts 4–6:

4 *Roy was always interested in dogs and unfortunately he'd never had the opportunity to have a dog of his own, just because of circumstances – where he lived and what not, and so I bought him a Shepherd pup, which was supposedly, you know, pure-bred Shepherd, but unfortunately people sold it because it didn't have papers with it, so it was a 'pup'.*

5 *Now how I got a German Shepherd was that I worked with a veterinary surgeon, as I've told you before, and there used to be a lady that brought her Shepherds along to the clinic and I used to admire them greatly, and she said, 'Well,' she said, 'if you get married I'll give you one as a wedding present,' so immediately I bustled around looking for someone to marry so I could get a Shepherd given to me for a wedding present, you see, so that's how that worked out well, not quite! However I got my Shepherd and he was my first dog, mainly because when I was a youngster I always wanted a dog but I lived with grandparents who wouldn't have dogs or cats and I was a very frustrated animal lover at that stage of the game, so as soon as I got out on my own I sort of went completely berserk!*

6 *So we rang up the breeder, and she sort of tried to describe the dog to us, which was very hard to do over the phone, so we went over to have a look to see what they were like, and we bought Sheba, because at that stage Bob was away a lot on semitrailers with the army and it used to get quite*

bad with the exercises – you'd have prowlers and perverts through the married quarters, so if we, you know, got a dog, which we could do because it didn't matter what sort of dog anyone had, it'd bark and they wouldn't bother us.

5 Types of complexity

Two distinct points need to be made here, and both of them run counter to received attitudes towards spoken language. One is that speech is not, in any general sense, 'simpler' than writing; if anything, it is more complex. There are, of course, many different kinds of complexity, and we have already noted one measure – lexical density – whereby speech will appear as the simpler of the two. But the patterns we have been illustrating, which are the patterns of the grammatical organization of the clause complex, referred to above as **grammatical intricacy**, would seem to be at least as central to any conception of complexity; and in this respect, speech appears as the more complex. The "syntactic complexity expected in writing", with which Deborah Tannen (1982) introduces her discussion of oral and literate strategies, does not turn out to be a characteristic of written discourse.

Of course, there are many other variables. Some writers achieve considerable intricacy in the structure of the clause complex; it can be learnt and consciously developed as a style. Some forms of spoken discourse, on the other hand, militate against it: rapid-fire dialogue presents no scope for lengthy interdependencies – complex semantic patterns can be construed **between** interactants, but usually without being realized in syntactic terms. And the categories of "written" and "spoken" are themselves highly indeterminate – they may refer to the medium in which a text was originally produced, or the medium for which it was intended, or in which it is performed in a particular instance; or not to the medium at all, but to other properties of a text which are seen as characteristic of the medium. So it is important to indicate specifically which variable of discourse is being referred to, when one variety is being said to display some distinctive characteristic.

My point here is to question the assumption that written language is syntactically more complex than spoken, and to suggest that, as far as one particular kind of syntactic complexity is concerned – the intricacy (I do not want to call it "structure" because that assumes a particular interpretation) of the sentence or "clause complex" – this is more a characteristic of the most unconscious spontaneous uses of language. The more natural, un-self-monitored the discourse, the more intricate

the grammatical patterns that can be woven. Usually, this kind of discourse will be spoken, because writing is in essence a more conscious process than speaking. But there are self-conscious modes of speech, whose output resembles what we think of as written language, and there are relatively spontaneous kinds of writing; spoken and written discourse are the outward forms that are typically associated with the critical variable, which is that of consciousness. We can use the terms spoken and written *language*, to refer to the idealized types defined by that variable.

Spoken and written language, then, tend to display different **kinds** of complexity; each of them is more complex in its own way. Written language tends to be lexically dense, but grammatically simple; spoken-language tends to be grammatically intricate, but lexically sparse. But these *buts* should really be *ands*, because the paired properties are complementary, not counterexpective. It is hard to find a form of expression which will show them to be such; I have usually had recourse to metaphors of structure versus movement, saying for example that the complexity of written language is crystalline, whereas the complexity of spoken language is choreographic. The complexity of spoken language is in its flow, the dynamic mobility whereby each figure provides a context for the next one, not only defining its point of departure but also setting the conventions by reference to which it is to be interpreted.

With the sentence of written language, there is solidarity among its parts such that each equally prehends and is prehended by all the others. It is a structure, and is not essentially violated by being represented synoptically, as a structural unit. With the clause complex, of spoken language, there is no such solidarity, no mutual prehension among all its parts. Its mode of being is as process, not as product. But since the study of grammar grew out of writing – it is when language comes to be written down that it becomes an object of study, not before – our grammars are grammars of the written language. We have not yet learnt to write choreographic grammars; so we look at spoken language through the lens of a grammar designed for writing. Spoken discourse thus appears as a distorted variant of written discourse, and not unnaturally it is found wanting.

For example, Chafe (1982) identifies a number of regular differences between speech and writing: writing is marked by more nominaliza-tion, more genitive subjects and objects, more participles, more attrib-utive adjectives, more conjoined, serial and sequenced phrases, more complement clauses, and more relative clauses; all of which he sum-

marizes by saying, 'Written language tends to have an 'integrated' quality which contrasts with the fragmented quality of spoken language' (p. 38).

The general picture is that of written language as richly endowed, while speech is a poor man's assemblage of shreds and patches. But Chafe has described both speech and writing using a grammar of writing; so it is inevitable that writing comes out with positive checks all round. Not that he has no pluses on the spoken side: speech is said to have more first person references, more speaker mental processes, more *I means* and *you knows*, more emphatic particles, more vagueness like *sort of*, and more direct quotes – all the outward signs of language as interpersonal action. Chafe summarizes them as features of "involve-ment" as opposed to "detachment"; but they are items of low general-ity, and negative rather than positive in their social value.

This leads me to the second point that, as I remarked above, runs counter to our received attitudes towards speech. It is not only that speech allows for such a considerable degree of intricacy; when speakers exploit this potential, they seem very rarely to flounder or get lost in it. In the great majority of instances, expectations are met, dependencies resolved, and there are no loose ends. The intricacy of the spoken language is matched by the orderliness of spoken discourse.

6 The myth of structureless speech

Why then are we led to believe that spoken discourse is a disorganized array of featureless fragments? Here it is not just the lack of an interpretative grammar for spoken language, but the convention of observing spoken discourse that we need to take into account.

Speech, we are told, is marked by hesitations, false starts, anacolutha, slips and trips of the tongue, and a formidable paraphernalia of so-called performance errors; these are regularly, more or less ritually, cited as its main distinguishing feature. There is no disputing the fact that these things occur, although they are much less prevalent than we are asked to believe. They are characteristic of the rather self-conscious, closely self-monitored speech that goes, for example, with academic seminars, where I suspect much of the observation and recording has taken place. If you are consciously planning your speech as it goes along and listening to check the outcome, then you naturally tend to lose your way: to hesitate, back up, cross out, and stumble over the words. But these things are not a particular feature of natural spon-taneous discourse, which tends to be fluent, highly organized and

silent thought; this would then tell us what the writer actually wrote. Figure 4 is a specimen.
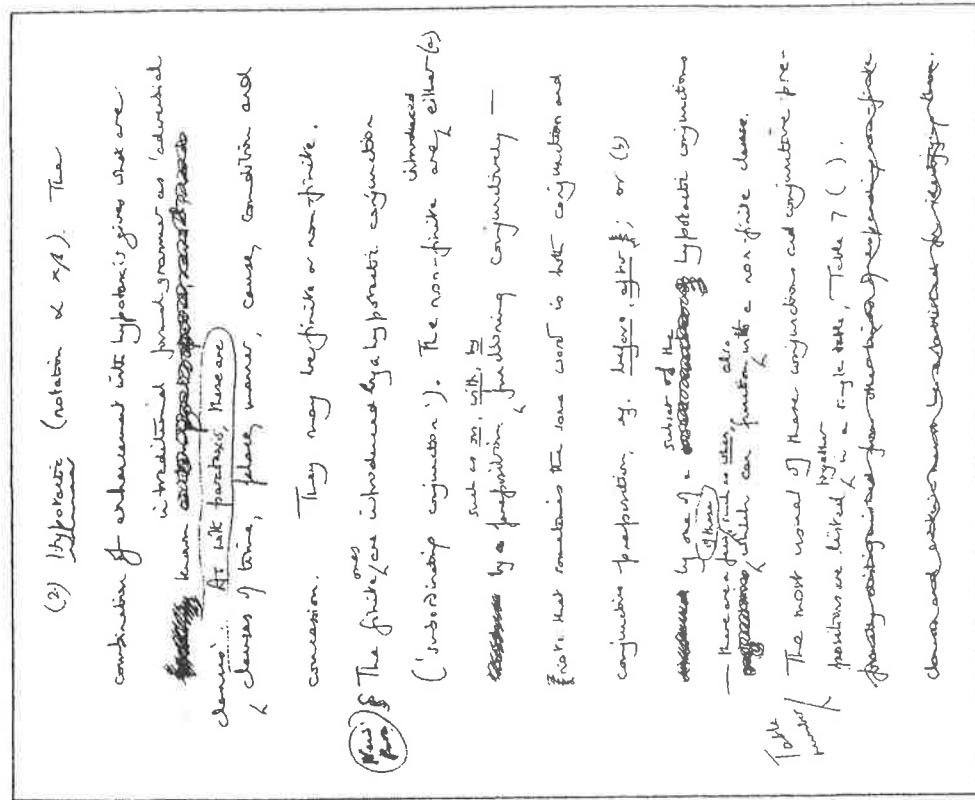

Figure 4 Written discourse

Now, there are undoubtedly research purposes for which it is important to show the planning, trial and error, and revision work that has gone into the production of a piece of discourse: it can have both educational and clinical applications. This is as true of writing as it is of speech: written material of this kind has been used in neuropsychiatry

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grammatically well formed. If you are interacting spontaneously and without self-consciousness, then the clause complexes tend to flow smoothly without you falling down or changing direction in the middle, and neither speaker nor listener is at all aware of what is happening. I recorded this kind of casual discourse many years ago when studying the language spoken to and in the presence of a small child, and was struck by its fluency, well-formedness, and richness of grammatical pattern. Interestingly, the same feature is apparent at the phonological level: spontaneous discourse is typically more regular in its patterns of rhythm.

However, while the myth of the scrappiness of speech may have arisen at the start from the kind of discourse that was first recorded, it has been perpetuated in a different way – by the conventions with which it is presented and discussed. Consider, for example, Beattie (1983: 33):

Spontaneous speech is unlike written text. It contains many mistakes, sentences are usually brief and indeed the whole fabric of verbal expression is riddled with hesitations and silences. To take a very simple example: in a seminar which I recorded, an articulate (and well-known) linguist was attempting to say the following:

No, I'm coming back to the judgements question. Indeterminacy appears to be rife. I don't think it is, if one sorts out which are counterexamples to judgement.

But what he actually said was:

No I'm *saying* I'm coming back to the judgements question (267) *you know there appear to* (200) *ah* indeterminacy (1467) appears to be rife. I don't think it is (200) *if one* (267) if one sorts out which are counterexamples (267) to judgement, *I mean observing*.

Here, the brief silences (unfilled pauses) have been measured in milliseconds and marked (these are numbers in brackets) and all other types of hesitation – false starts, repetitions, filled pauses and parenthetic remarks put in italics. It is these hesitations (both filled and unfilled) which dominate spontaneous speech and give it its distinctive structure and feeling.

In other words: when you speak, you cannot destroy your earlier drafts. If we were to represent written language in a way that is comparable to such representations of spoken language, we should be including in the text every preliminary scrap of manuscript or typescript, with all the crossings out, misspellings, redraftings and periods of

for most of a century. But for many purposes the discarded first attempts are merely trivial; they clutter up the text, making it hard to read, and impart to it a spurious air of quaintness. What is much more serious, however, is that transcribing spoken discourse in this way gives a false account of what it is really like. It may seem a harmless piece of self-gratification for a few academics to present spoken language as a pathological phenomenon; one might argue that they deceive nobody but themselves. But unfortunately this is not the way. Just when we are seeing real collaboration between linguists and educators, and the conception of "language in education" is at last gaining ground as a field of training and research, it seems we are determined to put the clock back to a time when spoken language was not to be taken seriously and could have no place in the theory and practice of education.

Let us recapitulate the argument. Speech and writing as forms of discourse are typically associated with the two modal points on the continuum from most spontaneous to most self-monitored language: spontaneous discourse is usually spoken, self-monitored discourse is usually written. We can therefore conveniently label these two modal points "spoken" and "written" language. Spoken and written language do not differ in their systematicity: each is equally highly organized, regular, and productive of coherent discourse. (This is clearly implied once we recognize them both as "language".)

Discourse in either medium can be characterized by hesitation, revision, change of direction, and other similar features; these tend to arise when attention is being paid to the process of text production. Since highly monitored discourse is typically written, these features are actually more characteristic of writing than of speech; but because most written text becomes public only in its final, edited form, the hesitations and discards are lost and the reader is shielded from seeing the process at work. Where they are likely to remain in is precisely where they occur least, in the more spontaneous kinds of writing such as personal letters. (Not all discourse features that are regarded as pathological, or assigned negative value, are of this self-monitoring kind. One form of discourse that has received a lot of critical attention is casual conversation, where the well-recognized characteristics are those of turn-taking, such as interruptions and overlaps. But the strictly **linguistic** "deviations" of casual conversation are mainly systematic features that would not seem deviant if we had a grammar that took into account the specifically "spoken" resources of the linguistic system.)

Spoken and written language do differ, however, in their preferred

patterns of lexicogrammatical organization. Neither is more organized than the other, but they are organized in different ways. We have already identified the principal variable. Spoken language tends to accommodate more clauses in the syntagm (to favour greater "grammatical intricacy"), with fewer lexical items in the clause. Written language tends to accommodate more lexical items in the clause (to favour greater "lexical density"), with fewer clauses in the syntagm. (This does not imply, of course, that the **average** number of clauses per clause complex will be greater in spoken language, because there may also be a tendency towards very short ones, especially in dialogue. It would be better to say that the greater the intricacy of a clause complex the more likely it is to be a product of spontaneous speech.) We must now return to this distinction in order to look through and beyond it.

7 A closer look at the difference

Let us illustrate with another passage of written discourse (Text 7):

Thus the sympathetic induction of people into a proper and deep understanding of what Christianity is about should not be bracketed simply with the evangelizing aim to which I referred earlier. It is not absolutely incompatible with that aim, however, for the following reason. What counts as indoctrination and the like depends upon a number of criteria, to do with the degree to which a teacher fails to mention alternative beliefs, the tone of voice used, the lack of sympathy for the criticisms levelled at Christianity or Humanism and so on. A dogmatic teacher or lecturer differs from an open one. The non-dogmatic teacher may be tepid; the open one may be fervent. Fervour and indifference are not functions of closedness and openness. (Smart 1968: 98)

This has the high lexical density that is typical of written language: 52 lexical items, 8 clauses, density 6.5 (ignoring embedded clauses; if embedded clauses are counted, then 66 lexical items, 19 clauses, density 4.7). Let us make this explicit by setting it out clause by clause:

clause complex boundary |||
clause boundary |
embedded clause   [[ ]]
lexical items shown in **boldface**

||| *Thus the* **sympathetic induction** *of* **people** *into* **a proper and deep understanding** *of [[what Christianity is about]] should not be* **bracketed**

simply with the evangelizing aim [[*to which I referred earlier*]]. ||| *It is not absolutely incompatible with that aim*, however, *for the following reason*. ||| [[[*What counts as indoctrination and the like*]] *depends* upon *a number of criteria*, || *to do with the degree* [[*to which a teacher fails to mention alternative beliefs*]] , *the tone of voice* [[*used*]] , *the lack of sympathy for the criticism* [[*levelled at Christianity or Humanism*]] and so on. ||| *A dogmatic teacher or lecturer differs* from an open one. ||| *The non-dogmatic teacher may be tepid*; || *the open one may be fervent*. ||| *Fervour and indifference are not functions of closedness and openness*. ||

To see how this lexical density is achieved, we can look at the first clause. After the cohesive *thus*, it begins with a nominal group *the sympathetic induction of people into a proper and deep understanding of what Christianity is about*. The Head is *induction*; the Postmodifier consists of a series of alternating embedded prepositional phrases and nominal groups, mainly one inside the other, and ending with an embedded clause:

| *the sympathetic induction* [*of* [*people*]]] [*into* [*a proper and deep understanding* [*of* [[[*what*] < *Christianity* | *is* > *about*]]]] |
group or phrase boundary |
embedded group or phrase   []
enclosed elements   < >
(the prepositional phrase *what . . . about* is discontinuous, the items *Christianity* and *is* being enclosed within it)

This nominal group contains a large amount of lexical information; and if we take this passage as a whole we find that out of the 52 lexical items the only ones that do **not** occur in nominal groups are *bracketed*, *simply*, *depends*, *do*, and *differ*. It is a characteristic of written discourse that most of the lexical information is encoded in nominal form: that is, in nominal groups, with their structure potential of Head (typically a noun or adjective), Premodifier (typically adjectives and nouns), and Postmodifier (typically embedded phrases and clauses, which then have further nominal groups inside them).

Not every instance of a nominal group has a complex structure, of course; the remaining ones in this passage range from:

| *the lack* [*of* [*sympathy* [*for* [*the criticisms* [[*levelled* | *at* [*Christianity or Humanism*]]]]]]] |

which like the first one involves considerable embedding, to simple nominal groups such as *tepid, the open one, fervour and indifference*. But it is the potential for extended structures of this kind which enables the nominal group to take over the main burden of the lexical content of the discourse.

So while spoken English is marked by intricacy in the clause complex, written English is marked by complexity in the nominal group. Since the lexical items have to go somewhere, lexical density is accompanied by its own characteristic resources within the grammar. The key factor is the structure of the nominal group; and within that, the critical resource is that of embedding, because of its open-endedness – the recursive function which generates sequences like:

implicit [*in* [*the argument* [*about* [*the necessity* [*of* [*the parahistorical approach* [*to* [*religious studies*]]]]]]]]

(Smart 1968: 98)

If now we construct a more 'spoken' variant of one of the long nominal groups taken from Text 7, we might arrive at something like the following:

||| *people can be sympathetically persuaded*   α
|| *so that they understand properly and deeply*   ×β α
|| *what Christianity is about* ||| β' β

where the structure is ×β α β' β. In place of the embedding, which is a nominalizing device, we have hypotaxis, which is a form of interdependency between clauses; and this points up the difference between the two variants.

This difference is obscured, on the other hand, if the grammar fails to distinguish between **embedding** and **hypotaxis**. Traditional grammar lumped them together, under the heading of subordination, and treated them both as embedding (noun clause, adjectival clause, adverbial clause). In other words, being a grammar of written language, it recognized only the category that was characteristic of written language. This ambiguity is in fact still present in the concept of embedding, which is why I have often employed the term rankshift to refer just to embedding in the strict sense, and so distinguish it from the interdependency relation of hypotaxis, where one element is dependent on another but is not a constituent of it. Hypotaxis is more like parataxis than it is like embedding; and both are characteristic of spoken rather than written language. So in order to do justice to the particular mode of organization of both spoken and written discourse, the grammar

needs to distinguish between the constituency relation of embedding, or rankshift, where one element is a structural part of another, and the dependency relation of 'taxis', where one element is bound or linked to another but is not a 'part' of it. Either of these relations can be reduced to a form of the other one, but only at the cost of distorting the nature of discourse.

The distinction between embedding and hypotaxis – between, for example, *the conviction* [[*that he failed*]] / [*of failure*] *and was convinced* || *that he had failed*; or between *the effect* [*of such a decision*] *would be* [[*that no further launchings could take place*]] *and if they decide that way* || *no further* . . . – is an important one; but it is really an instance, and a symptom, of a more general and fundamental divergence. As always, when we talk about these phenomena, and when we illustrate them, they will appear as dichotomies: either this way or that. As always, however, at least in the present context (but also in most issues that have to do with language), they must be seen as tendencies – more or less continuous variation along a line, but with most actual instances (most texts, in this case) tending towards one pole or the other. The divergent tendency that is manifested in the distinction of hypotaxis and embedding is one that can be expressed in terms of the familiar opposition of process and product. Written language represents phenomena as if they were products. Spoken language represents phenomena as if they were processes (see the discussion in Martin 1984b).

In other words: speaking and writing – each one makes the world look like itself. A written text is an object; so what is represented in writing tends to be given the form of an object. But when one talks, one tends to say that one is doing; so when one talks about something, one tends to say that it happened or was done. So, in Text 3 above, the written variant tells the story in nouns: *visit, sense, risk, attempt, action*; whereas the spoken version tells it in verbs: *visited, ended up feeling, might get hurt, tried to do.*

This is to look at it from the point of view of the writer or speaker. For reader or listener, there is a corresponding difference in the way the discourse is received. To the reader, the text is presented synoptic- ally: it exists, spread out on the page. So the reader is predisposed to take a synoptic view of what it means; behind it is a tableau – like the pictures from which writing originally evolved. But when one is listening, the text reaches one dynamically: it happens, by travelling through the air. So the listener is predisposed to take a dynamic view of what it means; behind it is a film, not a picture.

8 Grammatical metaphor

Where then in the linguistic system do spoken and written discourse diverge? A language, if it is not written down, consists of three interrelated subsystems: a semantic system (meanings), coded into a lexicogrammatical system (wordings), recoded into a phonological system (sounds). A language that has a writing system has an alternative form of expression: visual symbols as well as sounds. In such a language, a written text could, in principle, be a spoken text that has been written down (a **transcription**); here the written version is a transcod- ing of something that has already been coded in sound. Most writing is not like this. Secondly, a written text could be an alternative **expression** of a given wording: in this case meanings are coded as words and structures ("wordings"), which are then expressed **either in** sound **or** in writing. If this was the norm, there would be no systematic difference between spoken and written texts; the medium would not be a significant register variable. But there are such differences; so, to some extent at least, spoken and written discourse must represent alternative **wordings.** In this third case, meanings are coded either as "speakable wordings" or as "writeable wordings", the former appropri- ate to the dynamic nature of the text process, the latter appropriate to the synoptic nature of the text product. This is the sort of interpretation we have been offering.

But is it the whole story? There is still a fourth possibility – that speech and writing can diverge already at the semantic level, so that spoken and written discourse embody different meanings. Is there any sign that this can happen? It would of course be only a very partial effect; no one has suggested that the two derive from different semantic systems (or even two different lexicogrammatical systems, for that matter). But we should consider the possibility that there is some flowback into the meaning.

Consider the last sentence of Text 2, in its original written form (2A):

The current popular concern over the environment has stimulated private civil actions of two main types.

We "translated" it into something more speech-like as:

At present, people are concerned about the environment; so they have been bringing quite a few private civil actions, which have been mainly of two kinds.

But this could be wrong; it may have meant:

At present, people are concerned about the environment; so there have been mainly two kinds of action being brought by private citizens.

There is no way of deciding: *by reference to the spoken version*, the written version is simply ambiguous. Compare the following, also from a written text:

A further complication was the 650-ton creeper cranes poised above the end of each 825-foot arm.

Does this mean:

Above the end of each 825-foot arm there were poised 650-ton creeper cranes, and they made the work more complicated.

or does it mean:

... and this made the work more complicated.

(i.e., not the cranes, but the fact that they were poised where they were)? Another example is:

Slavish imitation of models is nowhere implied.

This could be reworded either as *it is nowhere implied that models have been slavishly imitated*, or as *... that models should be slavishly imitated.*

Examples of this kind could be added to indefinitely; they arise because nominal constructions fail to make explicit many of the semantic relations that are made explicit in clause structure. Written discourse conceals many local ambiguities of this kind, which are revealed when one attempts a more "spoken" paraphrase.

But the final sentence of Text 2 illustrates another significant feature of written language, which can be seen in the wording *popular concern over the environment has stimulated private civil actions*. We reworded this as *people are concerned about the environment, so they have been bringing private civil actions*. The original is one clause with the verb *stimulate* representing the Process; in other words, the thesis is encoded as a single happening, and what happened was that A brought about B. But A and B are themselves nominalized processes. The meaning of *stimulate* here is as in *pruning stimulates growth*. The spoken version represents the thesis as two distinct processes, linked by a relation of cause; cf. *if the tree is pruned, it will grow.*

Here one kind of process has been dressed up by the grammar to look like a process of a different kind — or, in this instance, two

processes, one mental and one material, have been dressed up as one which is neither. This coding of a semantic relation **between** two processes as if it was **the** single process is very common in writing; the sentence immediately preceding Text 2A contained another example of the same thing, here with the verb *leads to*:

A successful tort action leads to a judgment of damages or an injunction against the defendant company.

But this is just one type of a more general phenomenon, something that I call grammatical metaphor (Halliday 1985, Chapter 10). Written language tends to display a high degree of grammatical metaphor, and this is perhaps its single most distinctive characteristic.

Here are three further examples of grammatical metaphor taken from various written sources, together with suggested rewordings which are less metaphorical:

Issue of the specially-coded credit cards will be subject to normal credit checking procedures.

"Credit cards have been specially coded and will be issued only when credit has been checked in the normal way."

Strong Christmas sales were vital to the health of the retail industry, particularly in the present depressed climate.

"Unless many goods were sold at Christmas the retail industry would not be healthy, particularly when the economy is depressed as it is now."

He also credits his former big size with much of his career success.

"He also believes that he was successful in his career mainly because he used to be big."

In all these examples nominalization plays a significant part, as it does in many types of grammatical metaphor; so it is perhaps worth stressing that nominalization is well motivated in English. It is not simply a ritual feature that has evolved to make written language more ambiguous or obscure; like the passive, which is another feature whose functions are widely misunderstood, nominalization is an important resource for organizing information. Take the example *youth protest mounted*, which is not a headline but a complete sentence from a feature article. We might reword this as *more and more young people protested*, or *young people protested more and more*; but the only way to get the combination of *youth* and *protest* as the Theme of the clause is by means

of a nominalization (not necessarily such a laconic one; it might have been *the protests of the young people*, but this is still a nominalizing of the process). So while there is a price to be paid, in that the information being conveyed may become mildly (and sometimes severely) ambiguous, there is also a payoff: more choice of status in the discourse. In terms of systemic theory, there is a loss of ideational information, but a gain in textual information. This of course favours the specialist: you need to know the register. If you do not know the register you may misinterpret the thesis, so the fact that it is highly coded as a message is not very helpful to you; but if you do know it you will select the right interpretation automatically, and the additional "functional sentence perspective" is all tax-free profit.

Some nominalizations of course cannot be denominalized, like *private civil actions at law* or *an injunction against the defendant company*. These are abstractions that can enter into the structure of a clause – civil actions can be brought, an injunction can be issued – but cannot themselves be coded as finite verbs. Much of our environment today consists of such abstract entities and institutions; their representation in nominal form is no longer metaphorical – if it ever was – and they have become part of our ideology, our way of knowing about the world we live in. Patterns of this kind invade the spoken language and then act as infiltrators, providing cover for other metaphorical nominalizations – most notably the pattern of lexically empty verb with the process expressed as "cognate object" (Range) as in *make a mistake* 'err', *have a bath* 'bathe', *give a smile* 'smile'. But in its principal manifestations it is typically a feature of writing. Writing – that is, using the written medium – puts distance between the act of meaning and its counterpart in the real world; so writing – that is, the written language – achieves this distance symbolically by the use of grammatical metaphor. It is often said that written discourse is not dependent on its environment; but it would be more accurate to say that it creates an environment for itself (see Nystrand 1987), and this is where it depends on its metaphorical quality. If I say *technology has improved*, this is presented as a message; it is part of what I am telling you. If I say *improvements in technology*, I present it as something I expect you to take for granted.

By objectifying it, treating it as if it was a thing, I have backgrounded it; the message is contained in what follows (e.g., *. . . are speeding up the writing of business programmes*). Grammatical metaphor performs for the written language a function that is the opposite of foregrounding; it backgrounds, using discourse to create the context for itself. This is why in the world of writing it often happens that all the ideational content is objectified, as background, and the only traces of process are the relations that are set up between these taken-for-granted objects. I recall a sentence from the O.S.T.I. Programme in the Linguistic Properties of Scientific English (Huddleston, Hudson, Winter and Henrici 1968) which used to typify for us the structures found in scientific writing:

The conversion of hydrogen to helium in the interiors of stars is the source of energy for their immense output of light and heat.

9 Ways of knowing and learning

In calling the written mode metaphorical we are of course making an assumption; in fact each mode is metaphorical from the standpoint of the other, and the fact that the spoken is developmentally prior – the individual listens and speaks before he reads and writes – while it means that the language of "process" is *learnt* first, does not guarantee that it is in any sense "closer to reality". It might be a hangover from an earlier stage of evolution, like the protolanguage that precedes the mother tongue. But personally I do not think so. I am inclined to think the written language of the future will go back (or rather forward) to being more processlike; not only because the traditional objectlike nature of written discourse is itself changing – our reading matter is typed into a memory and fed to us in a continuous flow as the lines follow each other up the screen – but also because our understanding of the physical world has been moving in that direction, ever since Einstein substituted space-time for space and time. As Bertrand Russell expounded it (1925: 54),

We are concerned with events, rather than with bodies. In the old theory, it was possible to consider a number of bodies all at the same instant, and since the time was the same for all of them it could be ignored. But now we cannot do that if we are to obtain an objective account of physical occurrences. We must mention the date at which a body is to be considered, and thus we arrive at an 'event', that is to say, something which happens at a given time.

Meanwhile, grammatical analysis shows spoken and written English to be systematically distinct: distinct, that is, in respect of a number of related tendencies, all of which combine to form a single package. But it turns out to be a semantic package: the different features that combine to distinguish spoken and written discourse can be shown to be related and encompassed within a single generalization, only when we express this generalization in semantic terms – or at least in terms of a functional, meaning-oriented interpretation of grammar. Speech and writing will appear, then, as different ways of meaning: speech as spun out, flowing, choreographic, oriented towards events (doing, happening, sensing, saying, being), processlike, intricate, with meanings related serially; writing as dense, structured, crystalline, oriented towards things (entities, objectified processes), productlike, tight, with meanings related as components.

In their discussion of the comprehension and memory of discourse, Hildyard and Olson (1982: 20) suggested that meaning is **preserved** in different ways by speakers and listeners:

Readers and listeners may tend to extract different kinds of information from oral and written statements. Listeners may tend to recall more of the gist of the story and readers may recall more of the surface structure or verbatim features of the story.

In other words, the listener processes text largely at the level of meaning, the reader more, or at least as much, at the level of wording. But this is specifically a function of the medium in which the text is received, rather than of the linguistic features of the code that lies behind it. The notion of different ways of meaning implies, rather, that there are different ways of knowing, and of learning. Spoken and written language serve as complementary resources for acquiring and organizing knowledge; hence they have different places in the educational process. Teachers often know, by a combination of intuition and experience, that some things are more effectively learnt through talk and others through writing. Official policy usually equates educational knowledge with the written mode and commonsense knowledge with the spoken; but teachers' actual practice goes deeper – educational knowledge demands both, the two often relating to different aspects of the same phenomenon. For example: definitions, and structural relations, are probably best presented in writing; demonstrations of how things work may be more easily followed through speech. The two favourite strategies for describing the layout of an apartment, reported in the well-known study by Linde and Labov (1975), would seem to

exemplify spoken and written modes of symbolic exploration. We may assume that speech and writing play different and complementary parts in the construction of ideologies (Hasan 1986), since each offers a different way of knowing and of reflecting on experience.

Considerations of this kind are an essential element in any linguistic theory of learning. The development of such a theory is perhaps the most urgent task of educational linguistics; and certain components of it can already be recognized: (1) the child's construction of language, from presymbolic communication through protolanguage to the mother tongue; (2) the processing of new meanings into the system; (3) the interaction between learning elements that are ready coded and learning the principles of coding; (4) the relation between system and process in language; (5) the unconscious nature of linguistic categories; (6) the social construction of reality through conversation; (7) linguistic strategies used in learning; (8) the development of functional variation, or registers; (9) the relation between everyday language and technical language; and (10) the development of generalization, abstraction, and metaphor. The absence of any general theory of learning based on language has been a significant gap in educational thinking and practice. This provides an important context for our current concern, since the complementarity of spoken and written language will certainly be a central issue in any learning theory which has language as its primary focus.