

Multimodality

A social semiotic approach to
contemporary communication

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1 Where meaning is *the* issue

Multimodality: simple, really

On my way to work the bus gets held up before a large intersection, even quite early in the morning. Sitting on the top deck, my eye is drawn to a sign, high up on the wall opposite; it shows how to get into the car park of a supermarket. It is not a complicated sign by any means, nothing unusual about it really. But I have puzzled about it: how does it work? Above all, how does it work *here*? It is about 150 metres before this complicated intersection. Drivers have to keep their eye on the traffic; there's no time for leisurely perusal. Of course, my academic interest in the sign lies in its joint use of image and writing. And so, one morning, when the bus is held up in just the right spot, I take a photo on my mobile phone, as one does (Figure 1.1).

If writing alone had been used, would this sign work? I don't think it could: there is too little time to take it in. A little later in the day, if shoppers tried to *read* the sign, the intersection would clog up. With writing alone, the message would, quite simply, be too complex. Using three modes in the one sign – *writing and image and colour* as well – has real benefits. Each mode does a specific thing: image *shows* what takes too long to *read*, and writing *names* what would be difficult to *show*. Colour is used to *highlight* specific aspects of the overall message. Without that division of semiotic labour, the sign, quite simply, would not work. Writing *names* and image *shows*, while colour *frames and highlights*; each to maximum effect and benefit.

If writing by itself would not work, could the sign work with image alone? Well, just possibly, maybe. *Writing and image and colour* lend themselves to doing different kinds of semiotic work; each has its distinct potentials for meaning – and, in this case, image may just have the edge over writing. And that, in a nutshell – and, in a way, as simple as that – is the argument for taking 'multimodality' as the normal state of human communication.

Except that, just across the road, on the other side, there is another supermarket. It too has a sign, on its side, just as high up; it shows *its* customers how to get into *its* car park. Figure 1.2 is a photo of this other sign. The sign is different: not different in the modes used but in *how* the modes are used. Colour is different, lines are differently drawn; the sign has a distinctly different *aesthetic*. Multimodality can tell us what modes are used; it cannot tell us about this difference in *style*; it has no means to tell us what that difference might *mean*. What is the difference in colour about or

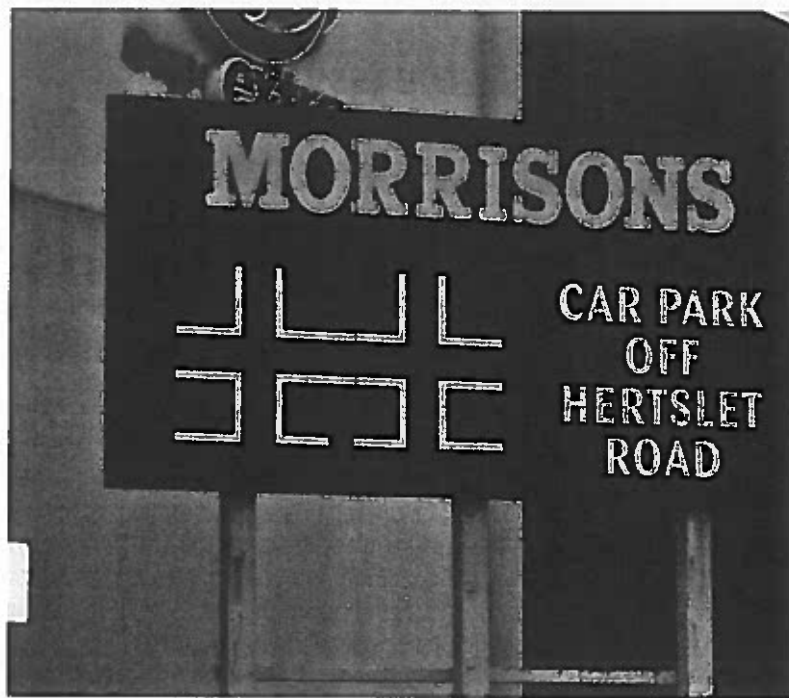


Figure 1.1 Morrisons supermarket

the difference in the drawing style? What *identity* is each of the two signs? What are the supermarkets 'saying' about themselves? What are they saying to their customers about themselves? Are these differences accidental, arbitrary? Can the *style* of one sign serve equally well for the other supermarket?

To answer questions of that kind we need a theory that deals with the sign in all its appearances, in all social occasions and in all cultural sites. That theory is *Semiotics*.

Of course, there are many theories of what communication ought to be and what might work. And then there is *power*. So just because something might not work – writing by itself, in this case – it does not mean that it won't be used. The reasons, often more important than 'will it work?'. There is tradition, of course. Writing has traditionally been used to do certain communicational things – and *instructions* being just two. Then there is officialdom. Bureaucracy as long as something has been announced in writing it has been committed. The rest will look after itself; or else it can be left to the law, where the 'nobody could have read it in that time' doesn't count. Here (Figure 1.3) is an example of that latter approach. It comes from one of the cities which played host to the European Soccer Championships of 2008. The sign announces tempor



Figure 1.2 Waitrose supermarket

to parking regulations for the duration of the championships. A rough translation might be:

Dear drivers!

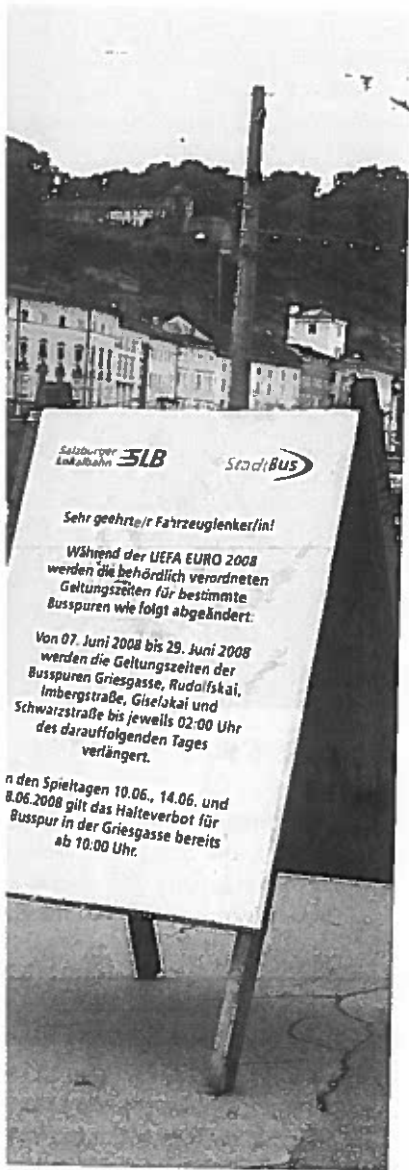
During UEFA 2008 the official times for bus lanes will be changed as follows. From 7 June to 29 June 2008, the normally applicable times for the bus lanes in the Griessgasse, Rudolfskai, Imbergerstrasse, Giselakai and Schwarzstrasse will be extended until 2 a.m. of the following day.

On days when games are being played, that is, 10.06, 14.06 and 18.06 2008, the no-stopping rule in the bus lane in Griessgasse will come into force earlier, from 10 a.m.

The instructions are not unfriendly in tone; though they are complex, official and, above all, impossible to read in the brief time before the lights ahead turn again. But then, there are times – perhaps many times – when communication isn't really the issue, and power is. That is a crucial point to bear in mind in thinking, theorizing and writing about meaning, communication and social matters.



Figure 1.3 Temporary parking arrangements, Salzburg, UEFA 2008



Salzburg, UEFA 2008

Simple points often have profound consequences; and so it is here: consequences for learning, for knowing and shaping information and knowledge, for attending to and communicating about the world and our place in it. Developing ways of thinking about this at once simple and complex phenomenon – that is, setting out a *social-semiotic theory of multimodality* – is what this book is about.

From semiotic system to semiotic resource

If that is the issue, then one ought to ask 'What has produced the explosive interest in the issue of multimodality over the last decade or so?' and, most obviously, 'Why now?'. *Image* has been a part of human cultures longer than *script* – though the difference between the two is not at all clear-cut. *Image* has been the subject of much interest, academic or otherwise, over millennia. *Gesture* is a presence in all cultures, even if in quite different ways. As 'sign language' it has been elaborated and articulated into a fully functioning representational resource. Whether as *gesture* or as *signing* it has been much studied (British Deaf Association, 1992). Academic disciplines have their interest in particular modes: Psychology in *gesture*; Art History in *image*, as has Mathematics, if differently so; *music* is studied in conservatories the world over. One difference is that whereas before these were the subject of interest in distinct areas of academic work, now there is an attempt to bring all means of making meaning together under one theoretical roof, as part of a single field in a unified account, a unifying theory.

A further reason, quite simply and yet most powerful of all, is this: the world of communication has changed and is changing still; and the reasons for that lie in a vast web of intertwined social, economic, cultural and technological changes.

Any attempt at a satisfactory answer to the questions 'Why?' and 'Why now?' has to go in the direction of the factors, everywhere connected, which have been and still are sweeping the world. One shorthand term which points to a collection of these is 'globalization' – which, for me, refers not only to financial globalization but to conditions which make it possible for characteristics of one place to be present and active in another – whether economic or cultural or technological. The forces of neoconservative ideology have sponsored and amplified these conditions, though they have been only partially causal. The factors at issue – let us say, forms of management, or ideologies around schooling – always impact in one locality and there they encounter locally present factors. There is a struggle of local forms and traditions with the features from outside, in which both are transformed, transformed in ways dependent on arrangements and dispositions of power in a locality.

The effects of this vastly diverse and complex phenomenon have led in very many places to the corrosion, fraying, dissolution, destruction and abandonment of older social relations, forms, structures, 'givens'. Globalization is not one 'thing'; it is differently constituted in different places, as are its effects and impacts, interacting with the vastly varied cultural, social, economic and political conditions of any one specific locality. Yet the deep effects are constant and recognizable everywhere. They have

brought a move from a *relative* stability of the social world over maybe centuries (as in Western Europe) to an often radical instability over decades or so. Stemming from that – and generated by it – are far-reaching changes in the domain of meaning: in representation and in 'semiotic production and distribution of messages and meanings; in mediation and communication. All have changed profoundly.

The semiotic effects are recognizable in many domains and at various levels of *media* and the *dissemination* of messages – most markedly in the shift from the book and the page to the screen; at the level of *semiotic production* from the older technologies of print to digital, electronic means; a *transformation*, in the shift from the dominance of the mode of *writing* to the *multimodal* as well as others. The effects are felt everywhere, in theory no less than in the practicalities of day-to-day living. Academic interest in the characteristics of the communicational world, the world of the screen and of multimodal communication is relatively belated, stumbling after the horse which had left the stable some time ago. Belated or not, there is a need to catch up and get back in the saddle.

The effects of globalization are clear. From (relative) permanence there has been a marked shift to provisionality and instability. Current theoretical metaphors are always revealing in that respect. For instance, while I am writing this book, the metaphor of *mobility* has great currency, as in 'mobile technologies' and 'mobile learning'. Like others, I use such metaphors; they are attempts to capture something of the essence of the alterations, transformations, and re-arrangements of social arrangements and practices. *Design*, is a term I have been using since the early 1990s; for me it indicates a shift away both from the earlier social and cultural *competence* as from the somewhat later *critique*.

Design accords recognition to the *work* of individuals in their social lives and brings that into the theory. In my use of the term, *design* is about a theory of communication and meaning, based – at least potentially – on equitable participation in the social and semiotic world. *Design*, by contrast with *competence*, is a move away from anchoring communication in *convention* as social norms. *Design* focuses on an individual's *realization* of their *interest* in their work and life. *Design* has, for me, a different focus and motivation: away from the past actions of others and their effects. *Competence* leaves a person unchallenged. *Critique* is oriented backward and towards superior power and authority with the *present effects* of the *past actions* of others. *Design* is prospective. *Design* focuses on my interests *now* in relation to the likely future of my actions. The understanding which inheres in *competence* was essential to *critique*, just as the understanding developed through *critique* is essential to the practices of *design*. *Design* draws on both these, carries their insights forward and deepens them, focused in a *social-semiotic theory of multimodality*.

As another example, take the shift from the term *grammar* to the use of *semiotic resources*. It indicates a shift from meanings traditionally associated with 'grammar', as fixed and highly constrained regularity. Occasionally I

'grammar' to contest its meaning with my sense of 'relative regularity of a semiotic resource'. Throughout the book I attempt to draw attention to the implications and the perspectives of the metaphors I use – *grammar, design, resource* – reflecting on their possible effects on what I want to achieve. While it may seem pedantic to do so, I spend time here and there drawing out such differences in perspectives and effects in the use of metaphors.

We do not yet have a theory which allows us to understand and account for the world of communication as it is now. Nor therefore do we have an adequate set of categories to describe what we need to describe. In their absence we tend to use the terms that we have inherited from the former era of relative stability, in particular from theories and descriptions of language, where, over a long time, a complex set of tools has been developed. But using tools that had served well to fix horse-drawn carriages becomes a problem in mending contemporary cars. Many of the older terms do point to aspects which we need to consider and shape for present purposes; at the same time we cannot afford to be reluctant in introducing necessary new terms. Many frequently used terms need careful re-examination; *representation* is one of these. The point is: adequate theoretical tools are needed to deal both with the present social, economic, political and cultural situation and the resultant conditions for semiosis.

To conclude the issue, here, of necessary theoretical resources, I will briefly return to *grammar*. Here we have a term known to nearly everyone in Western societies even though there is not much agreement as to what it might mean. There is a certain feeling – held with different degrees of conviction in different domains – that grammar is about rules, conventions, certainty: phenomena that are fixed, settled. When business leaders, politicians, media pundits, bemoan that the young leave school and are unemployable because they cannot 'write a (proper) sentence', they look back some thirty or forty years and seem to discern, through a sepia-tinged haze, that in their day the teaching of grammar had produced just such ideal conditions. They note that the young do not use the rules which they are certain that they had followed way back then; and which they think they use still, in their present practice. Adherence to linguistic convention is equated with adherence to social convention and consequently with social 'stability'. Alas, the present is deeply unstable; no amount of nostalgia can change that. The need is for a labour force that can meet the semiotic demands of conditions now. But in this, 'grammar' in its older sense of 'a stable system of rules' is an obstacle to necessary action.

Representational and communicational practices are constantly altered, modified, as is all of culture, in line with and as an effect of social changes. That inevitably makes the grammar of grammar books a record of the past social practices of particular groups, in speech as in writing: useful maybe *then*, but neither used nor useful *now*, not even for those who wish it were otherwise. If I use the term 'grammar' it leaves me with the need to contest its implied meanings of 'fixed rules', 'stable convention', and so on, or to use a term which is free of such histories of meaning. At the moment I generally choose the latter route, using the term 'resource', as in

'resources for representation'. *Resources* are constantly remade; never willfully arbitrarily, anarchically but precisely, in line with what I need, in response to some demand, some 'prompt' now – whether in conversation, in writing, in silent engagement with some framed aspect of the world, or in inner debate.

Semiotic resources are socially made and therefore carry the discernible regularities of social occasions, events and hence a certain stability; they are never fixed, alone rigidly fixed. No degree of power can act against the socially transformative force of interaction. This is not the point (nor the purpose of this book) to talk about the benefits or disbenefits of *stability*, or the need for stable 'rules' in order to attain – even if never to guarantee – relative security of communication.

Cultural difference and communication: the 'reach' of the theory and the 'reach' of modes

Most readers will take it as given that a society, its cultures and the representations of their meanings, form a tightly integrated whole, at a certain level of generality at least. If that is so, then differences between societies and cultures means differences in representation and meaning. That is close to a commonplace. We know that languages differ and that those differences are entirely linked with differences of history and cultures. What is the case for 'language' is so for all representation – for modes as for discourses as for genres – and in all communication: patently so with music with image, with clothing, food, and so on. Chinese opera is not the opera of Mozart or Puccini. For me, as someone from 'the West', it takes much focused semiotic work to understand its meanings, its aesthetics; roughly the same amount of work I imagine, that it takes for someone who has grown up with Chinese classical music to make sense of 'Western' music.

The more pronounced the cultural differences, the greater are the differences in the resources of representation and in the practices of their use. This means that when theorizing and writing about communication, I can talk with some confidence about the few cultures that I know reasonably well. Where my knowledge becomes more general, I can only talk vaguely and generally. I have a degree of confidence, 'inwardness', with several anglophone cultures, and different degrees of 'inwardness' with some of the cultures of mainland Europe. I have a glancing acquaintance with some cultures in Asia and Latin America, where I have been a casual visitor. I make no strong claims about those cultures and none about those of Africa: it would be foolish for me to do so.

So what is the 'reach' – the applicability – of the theory I put forward here? In general is it, how far and where and in what ways does or can it apply? Is it confined to Western Europe alone? What claims to understanding or insight can I make with this theory outside 'the West', broadly? I have, in any case, a problem with the notion of 'universals' – such as 'universals of language', or 'universals of communication' – so I am not tempted much in that direction. The universe of cultures and of cultural difference on our small planet is too vast for such generalization.

There tend to be contradictory views on how to deal with this. As far as 'language' is concerned, we know, on the one hand, that 'languages differ' in the way they name the world – in 'words' as in syntactic and grammatical forms; we know that lexical fields are close mappings of social practices. To give a banal example, English does not have the word 'Weltschmerz' and German does not have the word 'literacy'. Each may struggle to find ways of bringing the other's meanings into their culture; in the case of these two examples, with little success so far. Culture is too complex to tolerate difficult transplants readily. On the other hand, we sort of assume that 'language equals language': that is, if there is a novel in Russian it ought to be possible to translate it into English. We expect significant overlap, even if not a one-to-one correspondence. In many cases the incommensurability matters. In a debate, Germans can talk about 'Wissen' ('knowing that') and 'Koennen' ('knowing how'): when the discussion moves to translating 'knowledge' from English to German (or Swedish) it is not straightforward to know which of these to choose. Or, another example: in English there are the two words 'teaching' and 'learning', verbs with an implied directionality of authority, in which 'teachers' have 'knowledge' and 'learners' have (or used to be assumed to have) the duty to acquire this knowledge. Vast theoretical and practical edifices and industries can and have been erected on such distinctions. Yet in many languages the same lexical root is used for this social domain: in German (as in Swedish) for instance, 'lehren' and 'lernen' are morphological inflections – 'alternations' – of the one lexemic stem – 'learn' in English. That makes it likely that German and Swedish societies might develop quite different theories around 'Education' to English society; and articulate them in their languages and their institutions. In each case it is the 'accident of lexis' – not of course an accident but the expression of a history of non-accidental social differences – which leads to such ontological wild goose chases.

Two theoretical approaches have characterized this debate. One is focused on culture; the other is focused on the human brain. Noam Chomsky's *universalism* is the best known recent exemplar of the latter, through his posited link between the organization of the brain ('mind' in his terminology) and that of language – his assumptions about the 'innateness' of linguistic competence (Chomsky, 1965). This asserts that the organization (the 'nature') of the human brain is shared by all humans; the 'deep' organization of language derives from 'deep', 'innate' mental organization, so that irrespective of superficial differences, at a basic level all human languages share the same organization. From this, Chomsky derives a noble political project (to which I subscribe), namely that this profound and essential equality of humans ought to have its reflection in a politics of real equality. From this I infer that the reach of a Chomskian theory in respect to my issue here is general; it has applicability to all humans; and the social and cultural really does not enter.

My view on that is that there are some highly general *semiotic* principles, which are common to all human (as well as to most mammalian and some other animal) communication. Consequently, these are present and evident in all human societies and their cultures. The most significant of these is that humans *make* signs in which form

and meaning stand in a 'motivated' relation. These signs are made with different means, in very many different modes. They are the expression of socially formed individuals who, with these signs, *realize* – give outwardness to – their meanings, using culturally available semiotic resources, which are shaped by the practices of members of social groups and their cultures. I assume shared *social, semiotic, communicative principles* and *dispositions* – which includes the *linguistic* as one instance. These principles and dispositions are articulated in communities in the ceaseless process of social (inter)action. Hence the principles and dispositions take part in the result of the specific social concerns of a community.

Given this stance, I assume that 'translations' across modes *within* a culture are both possible and hugely difficult; from *image* to *speech* – the 'evocation' of a description – of a painting in a conversation about an exhibition; or *from writing*; or from oral poetry to poetry in written form. I assume that 'translations' across cultures, whether in the same mode (from *writing* to *writing* – from *novel* to that *novel* in English; from *gesture* to *gesture* – from the 'French shrug of indifference to an English version) or across different modes, are possible, though always achieved with enormously difficult selection; at a level of generality; and inevitably with significant changes in meaning.

Stated like this, it implies that in its *most general* features, in its outline and direction, the theory applies to all cultures. In the *specificities* of culture there are often vast differences in the articulation of these principles, which lead to the transfer of the theory from culture to culture. Readers need to assess whether, where, in what ways or to what extent my comments and observations in some cultures and speculations based on these, are 'translatable' from one to another of the cultures with which they themselves are 'inwardness'. This features as a topic in both Chapters 5 and 6.

To give an example of principles shared by all cultures: I have mentioned the most important: (1) that *signs are motivated conjunctions of form* and that conjunction is based on (2) *the interest of the sign-maker*; using (3) *available resources*. These are principles of sign-making. There are then, at a level, resources for making signs. Here too there are commonalities of a kind. As one instance, for meaning-making to be possible, human cultures provide means for *framing* aspects of the world to which an individual needs to attend. A culture will therefore provide its distinct semiotic resources (complexes of) signs: what sorts of things are framed, how they are framed, what kinds of frames there are, and so on, and these will vary from culture to culture. Expressing this starkly: there is *no meaning without framing*.

These are instances of *general principles*; and of means and processes of sign-making in any culture and in any mode. They provide a starting point in the study of meaning in any one culture. I do not call these 'universals', though I regard them as shared by all human cultures, as well as by many other species. These principles are based on experiences common to humans in social groups.

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engagement with a world both vastly different at one level and yet presenting common challenges. If we take this line of argument we can acknowledge commonalities at a very general level and yet be able to focus on the specificities of cultural difference. The theory can then provide a shared frame at its most general level and respond to specific needs at the level of any one culture and its modes.

That represents one theoretical take on the issue of 'reach'. There is then the social and cultural aspect of that notion, namely that of the 'reach' of modes. Here the question is: 'What areas are "covered" by a mode in a specific culture?' or, differently, 'Do all modes cover the same terrain?'. In a multimodal approach it is *modes* – rather than say, 'languages' – which are compared. *Modes* are the result of a social and historical shaping of materials chosen by a society for representation: there is no reason to assume that the mode of *gesture* in Culture 1 covers the same 'area' or the same concerns, or is used for the same purposes and meanings as the mode of *gesture* in Culture 2 – quite apart from the (lexical and syntactic) differences mentioned just above.

For instance, *gesture* may be used to deal with meanings around 'attitude' in two cultures; yet what is 'addressed', made into an area of common interest within the area of 'attitude', may be quite different. The English 'eyes raised heavenward' means something different to the French shoulder shrug; though both carry meanings of a personal stance to some event or utterance. English culture does not have an equivalent to the French quick, limp-wristed shaking of the drooping hand – used by women more than men – to convey 'disapproving astonishment'. Quite to the contrary, it is likely that aspects of the cultural domain covered by a mode in one society is not covered by that mode in another culture. An area such as 'politeness' may be dealt with extensively in *speech* in one culture and by *proxemics*, by *gesture* or by *facial expression* in another. In other words, if all modes are called on to make meaning, there is no reason to assume that the 'modal division of labour' will be the same across societies. That is a radically different position to one which held when the assumption was that 'language' did all significant cultural semiotic work.

These differences have been addressed in the study of intercultural communication. Yet here too an approach focusing on modes might be highly useful. An area in which this is a real issue is that of translation. Until recently that has focused on language alone. In the subtitling of films for instance this becomes significant. But what about a translation of a movement, an action, a gesture that is entirely understood in one society and either entirely misunderstood or not understood in any way in another? We simply can no longer assume that the reach of modes is the same across different societies and their cultures. Modes occupy different 'terrains' from one society to another. We have to begin looking at the field of meaning as a whole and see how meaning is handled modally across the range of modes in different societies.

The politics of naming

Somewhat related to this is the difficulty of 'naming'. It has two distinct, unrelated, aspects: one is political, the other theoretical. The political aspect is to name the political/social/cultural world about which I am writing. It is the unremarkable, ordinary world, for me. As an insider, its characteristics are obvious for me to see; however much I attempt not to do so, I use my 'insiderness' as a crutch in judging other parts of the world around me. Should I use names such as 'First World', 'the developed world', 'the post-industrialized world', 'the West' in talking about the world in which I have lived and worked; and about 'the East', 'Third' or 'Fourth' world in talking about parts of the world unfamiliar to me, and which are socially, economically, with profound differences in history and culture? Such questions are usefully discussed in the writings of Immanuel Wallerstein (2001) and others, from the difficulty of drawing meaningful boundaries for any of these complex, multiplying and overlapping terms, each brings with it specific meanings, more than not potentially harmful in their application, meanings which I would prefer to import into my text.

From a semiotic perspective, all cultures, all semiotic 'worlds', are rich, and equally so. Each of these domains – the 'First World' say, or 'Western European anglophone world' – is highly diverse within itself, culturally and semiotically. Different parts of 'the First World' (whatever that might be) are deeply different from each other. As one small semiotic example, some societies in the 'First World' make use of character-based scripts while others use alphabetic scripts. This one difference alone brings deep differences of ontology, of cultural dispositions towards representation, to media systems; it has effects on knowledge and identity.

Absolutely related too is the issue of 'globalization'. I take it that this term refers to something real – for instance, the fact that in very many places around the globe economic, political, social and cultural values and practices are subject to change which come from 'outside' the domain regarded as the immediately framed 'local site'. Within that frame these 'external' factors interact with the meanings, values and practices of the 'local site' – differently there in different places. Semiotically speaking, this leads to constant change, transformation, 'blending'. Constant blending is by no means a new phenomenon, even though the (now fading) fashionability of the term 'hybridity' had seemed to suggest otherwise. Blending is as old as humankind itself, as archaeologists demonstrate even in the most remote of the globe still remote now to the 'first world'. Or as we can see everywhere in the world, even now, at any time. On a recent train journey in Germany – from the north of the Rhineland to Munich – three couples in their late forties or early fifties boarded the train in Frankfurt, about 9.30 in the morning. I had caught the train in Essen, about two hours to the north. Listening to the group's German dialect, I could not tell whether they were from a Hessian dialect area, or from a Franconian or a Swabian one (my own dialect is middle Franconian). They were in high spirits, very friendly indeed – i

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me to join in a morning coffee-cum-picnic which they had unpacked and spread on two of the tables, with garlands across the windows; and so I asked where they were from. The answer was Germshheim: a town just north of Heidelberg, a region which just about straddles all three dialect areas. Clearly, people in this area – as in very many places (Rampton, 1995; Sebba, 1993) – are engaged in constantly assimilating, transforming features of the dialects around them and integrating them into a constantly changing yet constantly coherent resource.

What is new is the intensity of this phenomenon and the effect in its present manifestation, its 'pace', aided by current means of transport of economic, social and cultural commodities. Electronic forms of communication can now make aspects of any specific 'where' into features encountered everywhere, with an unspoken and urgent requirement for it to be made sense of 'there'.

What is not new however, is the set of names, the lexicon, which we have to name this differently paced social world. That is a problem, which makes the issue of theory and of naming within theory urgent. There is a need for new names. Ferdinand de Saussure suggested, at the very beginning of the twentieth century, that Linguistics – in its theory and terminology – as the then most advanced study of any semiotic system, might suffice to 'furnish forth the wedding tables' for the semiotic feasts to come in the new century. This seemed a reasonable hope, given that that expectation was expressed in the high era of abstraction in the Social Sciences: Linguistics and Semiotics included. In certain areas of the study of language in particular, concepts such as 'language', 'langue', 'parole', 'stood in' for the tendency towards achieving a grasp of the particular via very high degrees of abstraction. By entire contrast, the study of *modes* in multimodal social semiotics focuses on the *material*, the *specific*, the *making* of signs *now*, in this environment for this occasion. In its focus on the material it also focuses on the bodilyness of those who make and remake signs in constant semiotic (inter)action. It represents a move away from high abstraction to the specific, the material; from the mentalistic to the bodily.

For that, it is essential to develop apt labels for a theory of representation and communication for the whole domain of multimodal meaning as well as for the level of specific modes. The theory and the labels will need to attend to the materiality, the specificity and the histories of (social) work of any one mode. The specific aspects of mode will need to be assimilated to superordinate terms which capture what is semiotically general to all modes in that society and to modes even across cultures; even though what is general is always articulated distinctively in a specific mode.

I devote a chapter to this issue of categories of the theory and of naming. Two terms figure prominently in what I have written so far and do throughout the book: *society* and *culture*. The distinction between them is not easy to make; there is not a clear line to draw. Nor is there a generally accepted sense in which the two terms are used (Williams, 1985); for many writers the two are near synonymous. The distinction that I make has two features: *society* emphasizes human action in social groups (that is, groups organized in a recognizable fashion around goals, purposes, organizations, shared practices, values and meanings). Social groups and actions are always

characterized by (differences in) power. *Culture* emphasizes the effects, the product of social actions and social work, whether physical and material or abstract and want of a better term, conceptual. Where the social is marked by power (difference) the cultural is marked by *values, evaluation* – itself the effect of social power. *Culture* in my use, is the domain of socially made values; tools; meanings; knowledge; resources of all kinds; *society* is the field of human (inter)action in groups, always of 'work'; of practices; of the use and effects of power.

I use the term *work*, wishing to stress social orientation and aims. *Work* involves worker, tools and that which is worked on. *Work* produces change, in the worker, the tools and in that which is worked on. Being social and purposive, change produces and embodies meanings. In working, the worker has experienced and learned something; the worker has changed. The tools have (been) changed by their use; what has been worked on has changed. Each of these changes has produced near new meaning. The effect of these changes is to produce cultural resources. For therefore, *culture* is the name for the resources which have been made, produced, remade, 'transformed', as the result of social work. Everything that is socially made and remade becomes part of cultural resources, imbued with the meanings of work of those who have made and remade the resources. Cultural resources, being meaningful, are semiotic resources. It is 'the social' which generates 'the cultural' in that, 'the semiotic'.

Constant engagement in (social) *work* as defined above, with socially made cultural semiotic resources and their constant remaking in daily actions, shapes my own inner resources in line with the meaning-potentials of these resources as encountered and remade, transformed by me. This describes the effects of communication and *learning: attention* to an aspect of the social world; engagement with it in transformative action; which constantly remakes my inner resources; and in that, characterizes my potential for future action in and on the world. Differently seen, it describes construction of knowledge for myself – always in social environments; with cultural resources available imbued with the meanings of those who have shaped and reshaped them in *their* social environments; responding to the needs of their times. In the course of these processes – a differently focused perspective on very much the same phenomenon – I am constantly remaking myself and refashioning myself in terms of my *subjectivity* (seen from a social and political perspective) and fashioning myself by constantly refashioning my *identity* – the process viewed from the perspective of my biography (Endress *et al.*, 2005); a biography which shares much and yet is not identical with the biography of any other member of my or any other social group.

Throughout the book, two other terms turn up frequently: 'sign' and 'concept'. While the book does not deal with 'concept', the term names much the same territory as does 'sign' – which, together with *mode*, is at the centre of attention. The term 'sign' belongs to Semiotics – the conjunction, invisible and indivisible, of form and meaning – while *concept* belongs to Psychology, and, deriving from there, to Pedagogy, where it names something called 'knowledge' in an entity called 'mind'.

A satellite view of language

Stepping outside the long tradition of seeing 'language' as a full means of making meaning, seeing it instead as one means among others, one can gain a 'satellite view' of language (Kress *et al.*, 1996). That metaphor recalls 'our' first views of the Earth through photographs from a satellite – that is, from outside the Earth, beyond its atmosphere. That view gave 'us' on Earth a startlingly different perspective; for instance showing with frightening clarity the boundedness, the limits of our planet: this is what we have, there is no more. From that time on, for many of us, it became troubling to pour old oil down the kitchen sink, because we could see, actually, that it wasn't simply going to disappear, that it would emerge somewhere else on this bounded Earth, with unknowable consequences. The satellite view showed us what we had known and had been able to ignore, in a way: that our planet, our Earth, was one small part of a much bigger whole.

A multimodal social-semiotic theory has a somewhat similar effect. It shows the boundedness of language – which we knew without knowing it – as indeed we had known about the destiny of the oil poured down the sink. 'Language' isn't a big enough receptacle for all the semiotic stuff we felt sure we could pour into it. But when I watch football or snooker, tennis or golf, I can see that the conceptual world of the football, snooker or tennis player as of the golfer is a field where semiotic work is most decidedly *not* done via *speech* – let alone *writing* – the occasional shouted 'here', 'oi' or 'Tessa' on an English football pitch notwithstanding. With snooker, the incredible precision of planning of geometrical strategies for specific shots and for the planned shape of the arrangement of the balls four moves ahead, is a domain outside (I am tempted to say 'beyond') 'language'. That is before we get to the practices of mathematicians (to which snooker or football players of course belong). The reach of *speech* or *writing* simply does not extend there. The semiotic/conceptual work done in these fields, as in countless other human social tasks, pleasures and professions, relies on modes remote from *speech* and *writing*. There are domains beyond the reach of language, where it is insufficient, where semiotic-conceptual work has to be and is done by means of other modes.

In this as in other ways, a social-semiotic approach to multimodal work makes a difference. The task is to establish, with as much precision as we might, what these differences are, in specific cases and circumstances. What new kinds of questions emerge and are made possible; how do persistent, older questions get recast, in ways possibly that lead to more plausible answers; and who might benefit in what ways from the different answers. In my area of work, the insights and benefits will accrue in all the areas of (theories of) learning, meaning, evaluation, assessment, subjectivity and identity.

In this it is important to be aware of the twin focus of the *social-semiotic theory* and of *multimodality*. The issue of 'access', for instance, can benefit from the insight that humans may have different orientations to modes and ensembles of modes – maybe with specific preferences for the temporal or the spatial, for image or speech, for the

gestural or the domain of bodily movement as in dance, and so on. This could bring enormous benefits. The *theory* of social semiotics opens the route to a clearer view of evaluation/assessment in different modes. This is explored in some detail in Chapters 4, 5 and 10. Multimodality and social semiotics together may bring real benefits in understanding apt forms of communication through better understandings of design: whether in the private or in the public domain – in pleasure and entertainment as much as in work.

To give a very simple example: in a science classroom the issue of plant cells has been discussed. The teacher might ask: 'OK, who can tell me something about a plant cell?' or she might say: 'OK, who can draw a plant cell with its nucleus?'. The response to the first request might be: 'Miss, the cell has a nucleus.' The response to the second has to be a drawing – very likely of a circle with the nucleus placed – as a dot or smaller circle – somewhere in the larger circle.

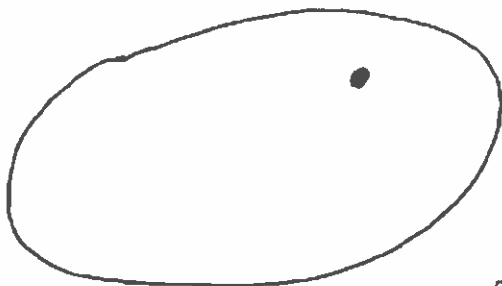


Figure 1.4 Cell with nucleus

In drawing, the student would have to make several decisions which she or he does not have to make in their spoken response. How big is the nucleus? Is it more like a dot or more like a small circle? And, most important of all, where does it have to be placed? At times I try this as a small exercise; some members of the audience are led by the seemingly implicit notion of 'centrality' in the word 'nucleus'; consequently they place the dot or small circle in the centre; others place it somewhere else. In either case, a decision has to be made about that issue: it is not avoidable. *Image* representation demands what I shall call (borrowing from Jon Ogborn) an 'epistemological commitment': the nucleus is like *this* and it is placed *there*. Any student looking at the drawing made by the teacher is entitled to think that that is where the nucleus belongs. That 'commitment' cannot be avoided; in an image, the dot or the small circle representing the nucleus has to be placed *somewhere*. In the spoken or written response, no commitment about placement (or size or shape) has to be made. However, 'epistemological commitment' as such cannot be avoided; though in this case the commitment is of a different kind: about entities as names and their relation. A separation of 'cell' and 'nucleus' is made in the spoken or written version and a relation of possession – 'having' – is established. Now the 'cell' 'has' something,

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This is one example. There are endless others. Theoretically, how do we now need to think about or define 'text'? How do we now think about *imagination*, when much of our thinking has been shaped and dominated by the possibilities offered in linguistic modes? What of creativity? And do we now have better means for paying attention to 'inner' representation and the 'inner' trade between different forms of representation, that is, to the entirely usual and hugely neglected process of synaesthesia? (Kress, 1997a). Is it not in that 'space' and those processes that much of what we regard as 'creativity' takes place?

.4 Cell with nucleus

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3 Communication: shaping the domain of meaning

Communication as semiotic work: a sketch of a theory

Communication is semiotic work. Work changes things: the tools, the work which is worked on. Semiotic work is no exception: it is work in social; changes produced by social-semiotic work are meaningful. Communication, whatever its form.

Assume that we take the situation in Colour plate 1 as a normal communication. Colour plate 1 shows an operating theatre; an operating stage. A 'scrub nurse' is in the foreground. Behind her, to the left, is the 'surgeon'; opposite him is a 'trainee-surgeon' – a qualified medic to become a surgeon. Behind them, separated by a screen, is the 'back on the right stands an Operating Theatre Technician. Represented are distinct professions are present; each with specific traditions and ways of talking and doing things. Their tasks are closely interrelated and on occasion is first and foremost a *clinical* situation; an instance of professional practice: a patient is here to be made better. It is a situation, an environment of (teaching and) learning: a trainee becomes a fully trained surgeon.

Communication is multimodal: by speech at times, as spoken communication or request; by gaze; by actions – passing an instrument, receiving an instrument; by touch. At all times communication is a response to something that might produce a *spoken comment*; that leads to an *action*; looking at the other produces a guiding *touch* by one of the other's hands as the hand is met by an instrument being passed. Communication happens when a participant's *attention* has focused on some aspect of the communication that has taken that to be a *message* and has *framed* aspects of that message for her or himself. That *prompt* has been *interpreted*, becoming a *response* and it in turn leading, potentially, to further communicational action. A sequence of *attention* → *framing* → *interpretation* is ceaseless; participants here, at all times, though differently in each case.

The larger social event here can be *framed* in at least two ways: from a *pedagogic* perspective. If we *frame* the event *pedagogically* as teaching and learning, the senior surgeon and the trainee move in

then are: 'How does teaching happen?' or, with a slight shift in point of view, though within the same frame: 'How does learning take place?'. From the learner's perspective, any event may at any one moment need to be attended to: the senior surgeon might give a spoken instruction; the scrub nurse might make a slight movement – or an explicit gesture – which he ought to attend to; the anaesthetist might glance at him to draw his attention to something. At any one time, any aspect of the complex dynamic communicational ensemble might be significant for the learner/trainee, so that he has to be constantly and entirely attentive to potentially significant cues as potential *prompts*. It is his *interest* as trainee surgeon that turns any one of these – or none – into a *prompt* for him. It is his decision. Once turned into a *prompt*, his *interest frames* the *prompt* in a specific way and he selects features from that now specifically framed complex message as the basis for his response. Yet at the same time the trainee surgeon is there also as an assistant surgeon and needs to be at least equally attentive to *prompts* of a clinical rather than a pedagogical kind. Frequently the 'same' actions are different signs in the other frame. This kind of *multiple framing* and *multiple attention* is likely to be the norm rather than the exception in most instances of communication.

What applies to this one participant in this situation applies to the other participants; differently, depending on their position, role, perspective in the complex ensemble – and depending on their own assessment of their position. Crucially, communication in the operating theatre is multimodal: a *gaze*, a *touch*, a *spoken comment*, a *gesture*, a change in *position*, all might act as a *prompt*.

The conception of communication shown in Colour plate 1 is a very different one. For one thing, here *mode* is not an issue. It may be that *language as speech* is assumed to be the *mode* of communication; or, more likely, the focus is on a *message* as 'content' quite abstractly and generally, rather than on the material and semiotic form of the *message*.

In the Saussurean schema, two interlocutors are linked in a dyadic structure. One initiates a message; the diagram and the theory both suggest that it originates from within one interlocutor's 'head'; there it is shaped into speech, seemingly; it is uttered;

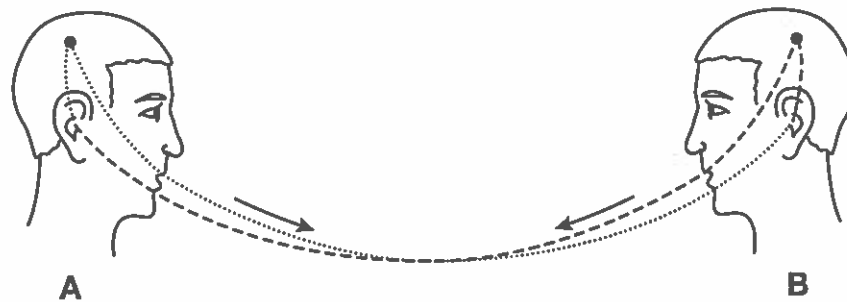


Figure 3.1 Saussure's diagram of communication

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the other participant receives this (spoken) message; and in that int it becomes the basis of a response.

Versions of this model had been active in twentieth-century communication; they still haunt conceptions of communication – even negation of many adaptations and alterations of that model. However, the conception of communication in the latter part of the century was based on the *Message → Receiver* schema of Shannon and Weaver (1948), from electrical engineering. Here the origin and active cause of communication is with the sender, who ‘encodes’ a message in a *code* shared by sender and receiver along a channel, to be ‘decoded’ by the receiver. This version received its most famous critique in Roland Barthes’ (1968) article ‘The death of the author’, which foregrounds the dominant role of the reader in communication.

In the model of communication sketched here, three concerns are central: social interaction and interchange around meaning, oriented to *making* and *remaking* meaning through the making of signs – simple *representation*. Sign-makers and their agency as social actors are central, and with them the social environments in which they make signs. This is with *resources for making meaning* – on *modes* and their *affordances* – with conditions and means for *disseminating* meaning – the *media*. A theory of communication needs to deal with the semiotic work done in all three and with the meanings which result. Questions of the kind ‘what kind of semiotic work for whom?’ are entailed by this model.

In communication, members of a community participate in the *remaking* and the transformation of their social environment from *meaning*. In that process ‘the social’ – as entities and forms, practices – is constantly articulated in (material) semiotic form *calibrated, re-registered* with semiotic/cultural resources. The periodic (or minute) ‘recalibration’ ensures that gaps between social structures on the one hand and semiotic accounts of them on the other do not get too far; and that the semiotic resources remain capable of representing the phenomena. This ceaseless recalibration produces a sense of stability; the presence of noticeable gaps gives a sense to members of the community that there have always been.

At the same time, social interaction via semiotic means produces *propositions*, ‘documentations’, ‘records’, more than ‘ratifications’, so to speak, and produces new meanings. Even the most ordinary social encounter is unpredictable; it is always new in some way, however slight, so that the *propositions* produced in any encounter are always new in some way. There are always possibilities and potentials which differ, even if slightly, from what was before the encounter. As a consequence, the semiotic work of interaction is socially productive, projecting and proposing possibilities of so many forms, entities and processes which reorient, refocus, and ‘go beyond’ and transforming what there was before the interaction.

; and in that interlocutor's 'head'

twentieth-century conceptions of communication – even if in the semi-act model. However, the dominant twentieth-century was based on the *Sender-Receiver* model (Weaver (1948), a model derived from the idea that communication lies between sender and receiver, sent and received, which insisted on the authority of the author', which insisted on

three concerns are in focus. One is the social environment, oriented to the processes of communication – simple or complex – in which social actors are in the foreground and they make signs. The second concern is the social environment and their affordances. The third deals with the media and their facilities. The fourth is the semiotic work done in relation to communication of the kind 'Who does what in this model.

Participants in the renewing, the environment from the perspective of social forms, as processes and their semiotic form: the social is resources. The process of (usually social) structures and processes on which other do not open too readily or are not capable of representing social forms: a sense of stability: the absence of a community that things are as they

semiotic means produces more than a sign, so to speak, of social change: it is a social encounter is never entirely stable, so that the 'accommodation' is in some way. They project social forms, from what there had been semiotic work of interaction is always the possibilities of social and semiotic forms, and 'go beyond', by extending communication.

Communication can only be understood if we see it as an always complex interaction embedded in contradictory, contested, fragmentary social environments: whether between groups or between individuals, coming together from social 'locations' which are always distinct in some respects. In the interaction, the social divergences/differences between those who interact provide the generative dynamic of communication. In the process, differences are reshaped/transformed in temporary social and semiotic accommodations. These in turn are the semiotically and socially productive force of communication: they project what is socially problematic into a public 'space' and produce temporary recordings of the social and the semiotic state of affairs; in transforming it, they shape it differently.

In other words, the hurly-burly of social life is the generative force which constantly (re-)shapes a society's semiotic resources and in doing so documents and ratifies new social givens. Communication and the resources made in that process, have the characteristics that they have because both bear the imprint of their social environments. The central point for the theory is: the social is the motor for communicational/semiotic change; for the constant remaking of cultural/semiotic resources; and for the production of the new.

To insist that 'the social has priority' is to say, above all, that the forms, the processes and the contents of communication are social in origin, they are socially shaped; that communication is embedded in social environments, arrangements and practices; that communication is itself a form of social action, of social work; and that communication is always a response by one participant to a prompt by other participants in social events. Some element of 'the social' prompts me into shaping a sign(-complex) as a message – which is my response to a prior prompt. Individuals act in communication, prompted by and in a social environment, with social-cultural resources.

Participants are embedded in networks of social relations with others who make meanings by making signs. Signs and sign-complexes – messages – have 'shape', structure and content, representing the interest of the sign-makers. Some of the signs/messages are taken up by participants in an interaction as prompts. As I have suggested, the two central assumptions are that communication is the response to a prompt; and that communication happens only when there is 'interpretation' (see Kress and van Leeuwen, 2001). Communication depends on the transformative/interpretative engagement by a participant in an interaction with a message made by another – in ways guided by their interest. Interpretation is the defining criterion of communication: only if there has been interpretation, has there been communication.

One consequence for this theory of communication and its practice is that even though an utterance has been produced as a message with the intention to be a prompt, it becomes a prompt only when it is taken as such by another participant. A message, intended as a prompt, engages the attention of a participant in the interaction. Attention derives in the first instance from the participant's interest – where interest names the momentary 'focusing' of a social history, a sense of who I am in this social situation now, as well as a clear sense of the social environment in which the

prompt occurred. 'Refusal to engage' – a denial of communication – is a *social* negation both of a social relation and of communication. It too is communicative.

Interpretation is central in communication and so, therefore, is the *interpreter*. *Interpretation* is a response to a prior *prompt*. The characteristics, the 'shaping *prompt*, constitute the 'ground' on which the *interpretation* happens. An *interpreter* is therefore always a mix of features of the 'ground', as the *prompt* for the interpreter, with the resources brought by the interpreter. An *interpretation* is the result of a series of *transformations* in which aspects of the *prompt* and of the resources brought by the *interpreter* are shaped, jointly, into a new entity.

The theory needs to be able to serve as the basis for description and analysis of all instances of communication. In suggesting that the environment of the theatre could be seen as 'normal', I am aware that reading the pages of a book or engaging with a website are different kinds of activities, in some sense. How the theory should, nevertheless, be able to deal with all instances of communication.

It might be useful to say – simplifying massively – that theories of communication have veered, broadly, between dyadic, interactive models, such as Saussure's, which are more sociologically or more psychologically oriented; and dyadic, unidirectional models such as the model of Shannon and Weaver (1948). Both imply social relations: unidirectional models tend to be more authoritatively oriented and in interactive models less so. The power relations implicitly coded in 'authoritative model' are those of the 'receiver' to recover – to decode – the meaning encoded by the author/sender; the interactive models leave the possibility of a 'negotiation' of meaning open.

Both the models mentioned earlier were conceived of as monomodal – one operating on the mode of speech, the other on a mode(/code) based on the affordances of electricity, modulated into 'code' by relevant technologies. Or, perhaps better to say that the issue of *mode* did not arise: it wasn't 'present'. The issue remained so right into the present. As mentioned, both models have been conceived in different ways – for instance by the (journalistically based) model of 'cultural gratification' (Blumler and Katz, 1974; Palmgreen *et al.*, 1985; Dervin *et al.*, 1985) in which *users* and their needs are in focus; and fundamentally by the explicit theory of Roland Barthes in his 'The death of the author'. From that point on, my sketch here is an attempt to give a social-semiotic articulation to the theory offered by Barthes in 1968.

To restate: in the sketch put forward here, three assumptions are fundamental: *communication happens as a response to a prompt; communication has happened only if there has been an interpretation; communication is always multimodal. Interpretation is central, so therefore is the interpreter; without interpretation there is no communication; yet it is the characteristics, the shape, of the prompt that constitute the ground on which the interpretation happens.*

Seen like that, *communication* is a process with two stages. Stage one is concerned with the interest of the initial maker of the *sign-complex*, the *rhetor*, with

intent of disseminating the *sign-complex* as a *message* and for the *message* to be taken as a *prompt*. In stage two, the *interest* and *attention* of an *interpreter* is in focus: it leads to *selection* of what is criterial for the *interpreter* in the initial message and to the *framing* of the selected aspects of the initial message as a *prompt*; which is, subsequently, *interpreted*. The meaning made in that *interpretation* can become the basis of a new *sign-complex* in the making of a new *message*. From the perspective of the initial maker there is a sequence of (a prior *prompt* and its *interpretation* →) new *sign-complex* (based on the maker's *interest* and a sense of the audience's characteristics) → a message intended as *prompt* → the interlocutor's attention to and engagement with the message → and (possible) response. From the interpreter's perspective, it is a sequence of *message* → 'recipient's' *interest* → *attention* → *engagement* → *selection* → *framing* → *transformation* → new ('inner') *sign*. The 'inner sign' may form the basis of a new *sign-complex*. Both stages are instances of *semiotic work*; both result in the making of new signs.

This does not make the semiotic work of the *rhetor* and the audience's/*interpreter's* subsequent engagement equal. They are not the same kind of work, with the same status and characteristics; nor with the same results. After all, 'setting out the ground' is very different in all kinds of ways to 'making selections' from that *ground* and interpreting aspects of it. The *rhetor* and the *interpreter* both perform *semiotic work*; but it is different work with different effects. 'Setting out the ground', whether in content, in mode, in structures, in genres, is different to making *selections*, *framing*, *transforming/transducting* and shaping these into an inner *sign-complex*.

'Reading' and the reader's design of meaning

This model of communication rebalances *power* and *attention*, with equal emphasis on the *interpreter* of a *message-prompt* and the *initial maker of the message*, the *rhetor*. That is the case in all forms of communication, whether in the operating theatre; in the 'reading' of a quite traditional text; in the engagement with a website; in visiting an exhibition; or in other environments. To show this, I will discuss two further examples: one, Colour plate 2, is a website – the homepage of Children's BBC; the other, Figures 3.2a and 3.2b, comes from a 'visitor study' in a museum (Selander, 2008; Insulander, 2008; Diamontopoulou and Kress, forthcoming).

Reading is communication. In many approaches – especially in pedagogic environments – 'reading' has been thought of quite analogously to the Saussurean model, Figure 3.1, and maybe even more so to the S → M → R schema. 'Older' pages of writing embodied notions of authority and authorship quite compatible with those models: the *author* assembled and organized *knowledge* on behalf of readers and displayed that as a (well-ordered) *text* on pages of print. *Readers* engaged with that *text-as-knowledge* in the order set out by the *author*: an order of lines; of words on lines; of arrangements of words as syntactic elements; of genres; of texts-as-genres; of pages; of chapters. That had been the embodiment of a unidirectional, hierarchical, dyadic relationship in which power rested with the author.

Contemporary pages, whether of information books such as those produced for instance, by Dorling & Kindersley or of websites such as the Children's homepage, Colour plate 2, are designed on the basis of a quite different social relation of author, reader and meaning-making. Above all, the text/page is shaped generally with the assumption that engagement takes place on terms of the (child) reader's interest: an assumption based on a very different social relation to that of the 'traditional' text and its genres.

Unlike the traditional page, designed with a given order/arrangement for the reader's engagement, this site – a 'homepage', which has 'visitors' rather than readers – is an ordering by the readers' interests through their (ordering-as-)design. The readers' interests determine how they engage with this page. In doing so they design not so much a coherence for this site/page' as an ordering which represents their interests in the sequence in which the elements are 'read' and ordered by them accords to choices which reflect their interests. In effect, the readers' interests, reflected in the manner of engagement, provides for them the design for this page: readers redesign the design (see Kress, 2003). This notion of 'reading' accords with the theory of communication outlined: material is presented; and readers/viewers shape their ordering of the material. Formerly, an author, as the initial maker of the text/ message, had provided that ordering; now that is work shaped by the reader's interest.

Clearly, this (home)page is designed. In its design it embodies and assumes the necessity of the reader's semiotic work. To an older reader the page may well give an impression of incoherence; for its intended reader it provides what this reader expects to do (at least some of) their own semiotic work of design. With this site the question of modes is unavoidable. At a first look it is not at all evident that the writing and the conveyed content do provide the main path of engagement for the reader/visitor; whether image does; or colour; nor whether placement of the main semiotic elements – for instance, in terms of a left-right and top-bottom order of the traditional page – determines an order of engagement/reading for the reader/visitor. In the page encountered on the internet, the cartoon characters along the band at the top of the page move. Movement as mode provides a further point of choice; again there may be generational factors at work in shaping preferences for engagement. It is important to observe that a formerly profound divide between the programme itself and the programme itself has become blurred. Whereas differences of genre have usually been done within one mode, by a specific selection and ordering of semiotic entities – syntactic, lexical and textual – here the generic differentiation is done in the means of modes: the mode of moving image makes the programme listing its own performance. In some ways this is akin to a crossing of the boundaries of semiotic 'domains': 'work' versus 'pleasure', for instance. But the generic difference marked modally is more profound.

In considering the homepage, the question of 'reading' and generation becomes central. If it is the case that members of a 'younger' generation (quite likely now to be separated by two generations from generations more 'tradition-oriented') read according to a design of the reader's interest – even though

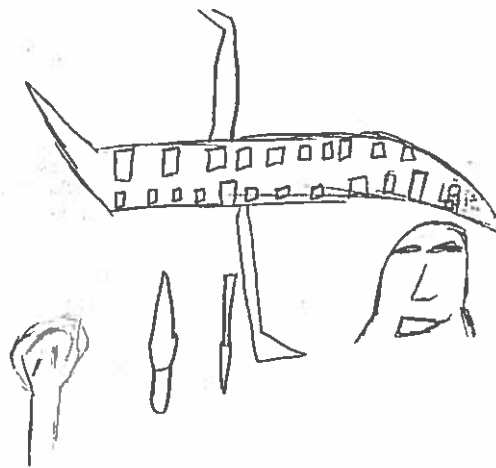
'ground' of someone else's message – it is highly unlikely that they will not carry this *habitus* into their engagement with any semiotic domain or entity in their world. These divergent practices and expectations about reading by readers of one generation (teachers) – and another (students) is, I assume, one of the major problems about 'reading' in schools. It might be objected that reading for pleasure is one thing and that reading/engagement which takes place in institutional sites – of work, of profession, of school – is another. For one thing, the issue of power is overtly and insistently present in institutional sites. Some readers will respond in alignment with power and others not; with generation playing a major role. Once developed, a *habitus* of reading is likely to be applied in all instances of communication, though the contingent factors of particular environments and the specific characteristics of readers will, as always, play their role.

My last example here – Figures 3.2a and 3.2b – comes from a research-project on visitor studies in museums (funded by the Swedish National Science Foundation). It was conducted in Stockholm and in London (at the Museum of National Antiquities in Stockholm; and at the Museum of London, in London). In Stockholm the object of the research was an exhibition on Swedish prehistory; in London two exhibitions were included – 'London before London' and 'Roman London'. The research project aimed to give insight into *how* visitors make meanings for themselves of these exhibitions; and, to a lesser extent, *what* sense they did make. Unlike schools, museums tend not to exercise power over their visitors in their engagement with an exhibition; even though they might wish to be able to so. That makes conditions of learning different in important ways.

In both Stockholm and London, visitors were invited to participate as 'couples': as grandparent and grandchild; as friends; as married couples; and so on. Those who accepted the invitation were given a camera to take photos of objects or displays which took their interest. They were videoed as they made their way through the exhibition. At the conclusion of their visit they were asked to 'draw a map' representing their sense of the exhibition; they were also interviewed briefly. Each of these four 'takes' was seen as a means of obtaining material that could serve as data to gain insight into forms of engagement and serve as evidence of 'learning'. Two maps, from the London data, each drawn by a member of each pair, Figure 3.2a and Figure 3.2b, are shown below.

An exhibition is *designed*; its designer(s) have specific aims: to *show* objects, images, reconstructions; to *tell* stories of the prehistory of a nation, and, in that, to achieve social, cultural and maybe political purposes. While these aims tend not to be overtly stated, in interviews with curators or the curatorial teams it was clear that these exhibitions were the result of much discussion, framed by policies of the museum.

Communicationally and *semiotically* speaking, an exhibition is a complex sign, designed to function as a message. It is meant as a *prompt* for the visitors' engagement. *Pedagogically* speaking, an exhibition presents a curriculum for the visitor/learner. In that context, the maps shown here are indications of the visitor's *interest*



which shaped their *attention*; which in turn *framed* particular a (design-)message. *Semiotically and communicationally speaking* response to this *prompt*. *Pedagogically speaking*, the maps are *si*

The 'maps' are of interest from any perspective. They do not, full account either of what the exhibition offers, nor of all of t either of the map-makers – one an 18-year-old woman, one an their visit. The photographs they took offered other material tracking video and the final interviews. Nevertheless the maps



Figure 3.2a
Map of a museum
exhibition 'London
before London':
'the prehistoric
camp'

Figure 3.2b
Map of a museum
exhibition 'London
before London':
'Heathrow'

their engagement and transformation/transduction of aspects of the exhibition in each case. They show a clear difference in *interest*; a consequent difference in *attention* and *framing*; and distinctly different *interpretations* of the same large overall message. The one exhibition was turned into distinctly different *prompts* by the *interests* of each of the two map-makers.

Most immediately they show a starkly different sense of what a 'map' is, what it might mean, what it does or can be, based on different resources brought; in this case conceptions of what might count as a *map*, and of *what is to be mapped*. In neither case is the notion of *the map* a conventional spatial one; the exhibition had been arranged as a large 'room' with relatively indistinct sections. Some questions posed, by these map-makers, seemingly were: 'What was the central topic to engage my attention?', 'What objects did I find most interesting?'. The maps are a record of features of the exhibition, not of the layout of the exhibition; a record of the objects and tableaux that seemed most salient and interesting. In the case of Figure 3.2b, the notion of *map* is 'conceptual'/affective: one question posed, seemingly, was: 'What, for me, was (the most) significant object/entity of this exhibition, along with some others and how shall I arrange them spatially to give a sense of their relative significance?'. For the first map-maker, that which incited her attention was portrayed along with some of the entities which prompted that; for the second map-maker, the *map* was set out as a visual display, a spatially ordered arrangement, in which the most significant object has the most salient position.

From the same display/message the two visitors had each fashioned their own *prompt*, design and a distinct interpretation. A number of questions jostle for attention here. 'Whose interest has been dominant: the curator's or the visitor's?', 'Has the curator succeeded more in one case and less so in the other?', 'What interest and what resources of the visitors are evident in these maps?', 'Has one of the two visitor couples failed in their 'reading'/engagement, or have both?'. These are questions crucial and urgent for a curator; they provide one motivation for engaging in 'visitor studies'. 'Failure' or 'success' are probably not concepts the curator uses in relation to the visitors; though 'effective communication' might be. They are central and general questions within this theory of communication, irrespective of the site: whether in a museum; a school; a site for public information; a site of professional practice such as surgery; or in an ordinary conversation.

What conclusions can be drawn from these examples for this theory of communication? Taking the two maps as an instance, one response would be to say that *responses* – meanings made from the exhibition – are unpredictable, 'individualistic', 'subjective', anarchic even. Or we might say that the most significant criterion is the *visitor's interest*. Both are unsatisfactory accounts: the first amounts to an admission that there is no theory that can account for differences in engagement and reading. The second ignores the role of the maker of the initial sign-complex/message in shaping the message/prompt. That, after all, has 'set the ground' from which the seemingly 'anarchic' or 'subjective' responses are produced, a fact which is demonstrable: both maps make reference to elements of the exhibition, such as the model

ed particular aspects of the overall
ionally speaking, the maps are a
he maps are *signs of learning*.

. They do not, of course, provide a
nor of all of the meaning made by
oman, one an 11-year-old boy – in
ther material for data, as did the
less the maps provide one lens on

airplane at a neolithic camp. While the response to this complex mes may not be predictable, it is not anarchic. If we stay with the persp interpreter/recipient, there seems to be a sequence where the recipient's

interest shapes attention, which produces engagement leading to selection of elements from the message, leading to a framing of these elements, which leads to their transformation and transduction, which produces a new ('inner') sign.

The interpreter's *interest* produces *attention*; *attention* shapes the *engagement*; this leads to *selections* being made; the selections are *framed*; the subsequent *transformation* and *transductions* of the elements in the *framing* that, the ('inwardly made') *sign* is produced. The sequence reshapes (as initial message, the 'ground', into a *prompt*. *Interest* is the motive force: for *attention* to the 'ground' constituted by the exhibition, for *engagement* to the 'ground'; it shapes *selection*, *transformation* and *transduction*; and *interest* is evident in the new sign, the map. The maps are *subjective* in the sense of being on the maker's *interest*; yet in exhibiting the principles of the maker's *interest*, clear relation to the ground/prompt, the maps are *principled*. They are *principled*.

This theory diminishes neither the significance of the semiotic work of the initial message, the *rheter*, nor that of the *interpreter*: the work of the *interpreter* fashions the 'ground' on which *interpretation* takes place is one essential part of the two-part structure of the process of communication. For the analyst of everyday communication, some aspects of the *design* of the initial message must be understood in order to engage in and make sense of the subsequent semiotic *interpretation*. The semiotic work of *transformation* and *transduction* within *interpretation* is the site of the production of 'the new'. It is work with which new semiotic entities which are always new, innovative, creative; not because of the participants in the interaction but because of the very character of these interactions, in which one conception of the world – the 'ground' of one participant – is met by the different *interest* of the other participant working out of that difference, with power and affect playing their part, a new conception is arrived at. Earlier, I called that 'an accommodation' because of both its provisionality and its emergence out of different interests, power and affect.

Practically, the curator has to ask what consequences follow from this work of communication for her or him or for the museum in strategies of design. Some specific questions: 'What path had the curator constructed for the visitor? how was that path followed or not followed?'. The curator might want to understand the principles underlying the differences in the path taken: as in interpretation. The concept of *interest* provides the overarching

happened, one of the map-makers was an 18-year-old student from Germany on a self-organized 'study-trip'; her interest is expressed in the detail of attention to the objects in her map; the other map-maker was an 11-year-old boy, a highly reluctant visitor. But in different ways – each time precisely and specifically – that is the case with each one of the maps.

Provisionality in communication: rhetoric and design, newly configured

An exhibition, like any semiotic entity – a website, the operating theatre, a book, a child's drawing – is the result of *design*. *Design* is shaped by the prior analysis provided by the *rhetor* through questions such as: 'What is the environment of communication?', 'What relations of power are at issue?', 'Who are the participants in communication?', 'What are their criterial characteristics?', 'What is the phenomenon to be communicated?', 'What resources are available to make the message?'. All raise the issue of *choice*: *choices* reflecting *interest* – as policies of the museum as an institution, for instance – and of the mediation of institutional policy through the interests of the curators; as well as *choices* assumed – by the designers/curators – to reflect the *interests* of the audience. *Rhetoric* – as the politics of communication – encompasses all aspects from the initial conception of the exhibition in the environment of the museum's policies, to the overall design/shaping' of the exhibition: in the salience given to particular themes and areas; to the selection of objects; to the modes chosen for representing specific contents; in layout; in lighting.

In all these, the *rhetor* and *designer* factor in – in different ways, with different conceptions of purpose, power and affect – the likely responses of an imagined audience. 'Are three-dimensional objects more salient, more "attractive", more noticeable than written captions or than longer written accounts/explanations?', 'Are painted scenes more engaging than three dimensional tableaux?', 'What effect does lighting have in creating *mood* and *affect*?', 'Is the distance at which visitors are able to engage with objects – for instance, whether they are permitted to touch an object, whether they are separated by a glass panel or a rail – a significant matter?'. The question of *affect* has to be addressed in all aspects of the exhibition: affect modulates the engagement of visitors.

In the map of Figure 3.2a, the two-dimensional *diorama* is represented in the mode of (two-dimensional) *image*; though elements are drawn in to the 'map' from other parts of the exhibition. The change, among other things, is from the genre of diorama to that of 'map'. The big skull at the top left of the map is located at the very beginning of the exhibition. *Selection* by the map-maker has changed a large room with many objects into an image where few objects are drawn into an entirely new coherent display. The maps, in other words, are representations shaped by *principles* of *selection*; by *transformation* – changes in ordering and configurations of elements within one mode; and by *transduction* – the change from meaning expressed in one mode to meaning expressed in another mode.

Curators might see themselves first and foremost as comm response to these maps might be shaped by a wish for better, n munication. Just like the operating theatre, the museum is more a site which is doubly framed, as a site of *education* and as a s Governments see museums as environments for *social education*. I a site of entertainment or of learning – curators are bound characteristics of their audience which have an effect on both.

In the present unstable social and communicational environn *rhetoric* best serves as a basis for establishing the characteristic as interaction. From a rhetorical perspective, each occasion of has to be treated – potentially at least – as unknown. Each time the conditions of communication: 'What are my purposes?', 'communicate?', 'What are the characteristics of my audience?' resources to do this, given the characteristics of my audience?' power obtain between myself and my audience?', 'What resource are available?', 'How are these resources best arranged to rep communicated?' and the larger framing question: 'Am I attem entertain, or both?'. These are essential questions for the rhetor, at all times. In the past, *convention* had provided 'routines' which now they are starkly present and need to be addressed, newly ear

Rhetoric needs now to be seen in the two-phase structure of con which it cannot deal with contemporary social givens. Commu reciprocal *work*. The sign-complex which is sketched by the *rhe* preceding analysis is elaborated in detail by the *designer* and is form by a *producer*. The sign-complex is presented to the audi *message*. Ideally, members of the audience shape the *message* a transforms that *prompt* into the new inner sign in the light of *inte* (and wider social, cultural, aesthetic and ethical) resources w an interaction. The *rhetor* has achieved nothing if members of attend to and engage with and interpret the *message* meant as Communication rests on both phases: the initial work of the rhet engagement and interpretative work of the audience, seen as in part of the process *engagement* is to use a relatively 'neutral' a state which assumes neither 'understanding' nor 'acceptance intended by the rhetor. It does assume the *attention* to the rhet *attention* and *engagement* lead to *selection* and the *reframing* of w as a *prompt*, there has been interpretation and communication.

The role of *rhetor* is complemented by the role of the *interprete* both the *rhetor* and by the *interpreter*. One sign-complex pro *message*. The other sign-complex is the result of *attention*, *engage* that message, *framing* these according to the interpreter's *interes* *transduction* and *transformation* reshaped as a new, inwardly fc That suggests two possibilities of naming: to use the label *rhetoi*

maker, whether of the initial maker of the *sign-message* or the interpreter of the *prompt*. Or we might use the label *rhetor* for the maker of the message that initiates a sequence and becomes the *ground* for the *interpretation*; and use the label *interpreter* for the sign-maker who *interprets* the *prompt*. That brings a distinction between 'setting the ground' and 'shaping and interpreting the prompt', both seen as the making of signs. I adopt that naming – *rhetor* and *interpreter* – to mark the distinction between *setting the ground* and *interpreting the prompt*. Each of the two has a distinct social function and effect. How each of them is carried out is a separate matter. It moves away, decisively, from a conception of successful communication measured in terms of the 'closeness' of the *interpreter's* sign to the sign of the *rhetor*.

The social is present twice in this framework: through the *interest* of the *rhetor*, who acts with a strong sense of the social characteristics of the audience and their relation to the *rhetor*; and through the social location and *interests* of *interpreters*. From the distinct vantage points of their social histories and present social positions, both bring their sense of the demands of the immediate social environment, of representational and communicational requirements of the phenomenon – the event or object – to be communicated and interpreted. Each brings their cultural/semiotic resources and values.

This conception of communication gives appropriate recognition to the semiotic work of curator and visitor; to teacher and student; to writer and reader; to the person who uploads a video to a social site and to those who respond to that video. It provides a shared frame of rhetorical and communicational work, modified according to the specificities of the social environment and of the technologies in use.

In conditions of political and social stability there is little need to give much or any attention to *rhetoric*; it drops out of theoretical and practical view. It is replaced by 'rules', 'conventions', 'how things are done and how things have always been done', in theory and in practice alike. Socially and communicationally, things run smoothly, in well-defined grooves; little reflection or effort is needed for what appear as unremarkable instances of interaction. Rhetorical considerations do still organize all of communication, all semiotic interaction, at all times, even in times of stability and the dominance of convention. The smooth grooves of convention obscure, obviate or lessen rhetorical effort: the semiotic work of rhetoric becomes invisible. As an issue it fades from view.

If we regard *rhetoric* as the politics of communication and regard *politics* as the attempt to shape and regulate social relations by means of power, it becomes clear why that should be so. In periods of stability the relations of power are known, predictable, naturalized – and so the frames of communication are stable, predictable, unchallenged. Usually there is little contestation of power in a social domain; the resources of representation and communication are aligned in relatively stable and predictable arrangements to ensure that this is so. Social relations appear, semiotically, in clear *generic* forms; these regulate and realize forms of interaction. Authority relations are clear; the 'appropriate' *modes* of representation as much as the 'appropriate' means of dissemination in each circumstance – the *media* – are well

understood and not contested. There are canonical forms for dealing with 'knowledge' – *discourses*; for representing the world – *modes*; for distributing texts-as-messages – *media*: book, television. Unknown and unpredictable instances of social interaction. The new is neither sought nor particularly valued. This is a myth of conditions of stability. It is, however, an effective myth.

In conditions of political and social *instability*, things are any or known; the grooves of convention have been worn away or are in any case new so that there are no grooves. Relations of power are maybe: they are contingent and unpredictable, subject to constant challenge. Things are *provisional*. For every occasion of communication, social relations need to be newly assessed; the resources to be used need to be freshly considered in their utility for *this* instance.

An apt metaphor might be that of a 'road' across a sandy landscape, wandering, diverging tracks, each forcing the anxious question 'Which track?', 'Shall we take this one or that?', 'What evidence do we have?' Each occasion of communication requires close assessment of the situation: 'What are the rhetor's purposes in *this* speech?', 'What are the criterial characteristics of the audience?', 'What power obtain between rhetor and audience?', 'What is to be communicated?', 'What representational resources are available?', 'What is their usefulness for this audience?', 'What is their usefulness for fashioning what I need to represent?', 'What is their usefulness for fashioning what I need to produce for this audience?'

Environments of communication: a historical view

Communication, being social and semiotic, has a social and semiotic history. We assume that semiotic changes 'track' social changes, we can use semiotic relations of social arrangements and practices and semiotic arrangements. We can do that in relation to any one semiotic feature or but we can also ask about the relation between semiotic forms and the social context mirrored in the forms and their uses. The changing uses and functions of modes should be revealing of social changes.

In the domain of education, looking at 'teaching materials' – recently, looking at screen-based materials – over the last sixty years it is easy to see deep changes in social/pedagogic practice and in semiotic forms more so than, at least superficially, in content. Over the last thirty years there has been a distinct move away – differently in different school subjects – from reliance on *writing* as the main or at times sole carrier of meaning to reliance on *image*. This is evident in the changing functions of modes in terms of quantity.

Quantifying the occurrence of modes is not straightforward; it is an attempt to count images in textbooks. Perhaps the outcome is

research project ('Gains and Losses: Changes in Representation, Knowledge and Pedagogy in Learning Resources' (2007–2009)) describing semiotic changes in textbooks in English, Mathematics and Science over a period of about seventy years from the mid-1930s to 2005, the number of images in textbooks for English had increased from virtually no images at all in the 1930s (average: 0.03 images per page) to two in every four pages in the 1980s (0.54 images per page), to three in every four pages in the very early 2000s (0.74 images per page). Compared to subjects like Science and Mathematics, the number for English is low, though for a subject ostensibly founded on and 'about' language, the change is surprising. It does represent by far the biggest increase proportionately among the three subjects: between 1930 and 2005, the average number of images in Science went up from 0.64 to 3.37 per page, and in Mathematics from 2.95 to 8.71 per page.

The shift in the relation of writing and image is equally marked and perhaps more significant in terms of the *uses* of modes for distinct and differing *functions*. This had happened independently of the digital technologies, which were barely emergent in the late 1970s, while the change began, noticeably, in the 1970s and carried on strongly into the 1980s: a clear indication that social forces were at work rather than that the effects were mainly produced by the digital technologies. The changes in representational practices happened within the traditional medium of the book, with its affordances and its forms of production, then still fully in the dominant position that it had traditionally held for the preceding three or so centuries, in the West.

Images are (as yet, relatively) difficult to describe and analyze since, unlike writing, they are rarely composed of clearly discrete constituent entities, as words are. Existing theories do not readily show how to describe or analyse visually represented entities. In a textbook it may not be clear at all whether a visual representation counts as one semiotic entity or as two. In Figure 3.4, for instance, are we dealing with one semiotic entity called 'the body and its digestive system' or with a series of entities: lungs, oesophagus, small intestine, etc.?

Nevertheless, there is a strong difference between the form of image of the 1935 book and that of 2002. There is an equally clear difference in the relation of written elements and image elements in the two cases. In 1935 the image was schematic and abstracted in relation to one conception of curricular need; the detail of the 1935 image has the function of providing an illustration/location for the curricular entities mentioned in the written part of the overall text. 'Curricular need' is the case also for the look of the image in the book of 2002, though now the 'curricular need' has changed. In 1935, writing was the dominant mode, carrying all the information thought to be essential or central to the curriculum; image had the function of 'illustrating'. In 2002, writing is one of two modes with seeming equal semiotic status: image no longer has the function of 'illustrating'. Image *shows* those curricular materials which are best – most aptly – represented in image. Writing deals with digestion as well, though not the physiology of digestion as before, but the biochemistry of digestion.

Animal Nutrition: Nutrition in Mammal 161

Digestion is the first stage of nutrition. It takes place in the *alimentary canal*. We shall now consider this process in detail.

The Alimentary Canal (fig. 148).

Food taken in at the mouth passes into and along a tube called the *alimentary canal*, the other end of which opens at

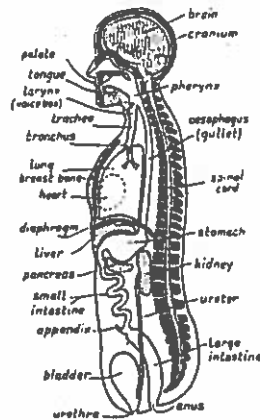


FIG. 148.—Chief internal organs of Man (simple scheme)

the hind end of the body. The opening is the *anus*. From the mouth upwards the parts of the alimentary canal are the "back of the mouth" (*pharynx*), the gullet (*oesophagus*), the stomach, and the gut (*intestine*). The whole of the canal, including the mouth cavity, is lined with a soft pink tissue

162 *Genet.*

[*muscular membrane*], very richly supplied with blood vessels. The gullet and the stomach are in the neck. The alimentary canal is within the body cavity of the neck to the hind end and membrane called the *diaphragm* cavity at the level of the

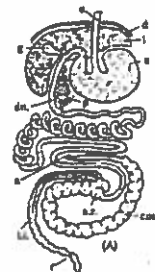


FIG. 149.—Diagram of alimentary canal (A) Thab

a = lower part of oesophagus, bladder and bile duct, p = pancreas, d = duodenum, l = large intestine, de = descending colon, ca = vermiform appendix, v = ventricle.

the body cavity into a small anterior portion (the *stomach*) and a larger posterior portion (the *intestine*). The *oesophagus* lies in the thorax, *diaphragm*. The *stomach* and *intestine* are somewhat simplified in fig. The *oesophagus* is a narrow tube, the *stomach* is a large oval sac extending into the abdominal cavity immediately

Figure 3.3 1935 Science: digestion

In 1935, writing was seen as a sufficient means for carrying information; image was very much a supplement (Barthelemy). Writing and image are treated by the designers of the textbook as separate affordances; and these are utilized in relation to present 'curricular' assumed characteristics – as likes, dislikes, preferences – of the

The dominant view, that writing carried all that was crucial and that no real attention could be paid to what image contributed. For image did in fact provide information not present in writing; but the dominance of the mode of writing provided categories both for and categories for 'recognition': what was not highlighted in the grammar of 'language' did not emerge into visibility. So the image made specific what the diameter of the oesophagus is compared to the body cavity, was not 'visible' as a significant contribution by the image

Science

n blood-vessels. The mouth
e pharynx and upper part of
remainder of the alimentary
This extends from the root
the body (trunk). A tough
n extends across the body
(posterior) ribs. It divides

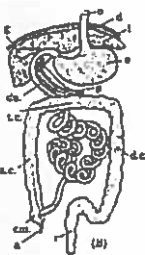


Diagram of a Mammal (much simplified).
B) Man
diaphragm, s = stomach, p = gall-
and pancreatic duct, f = liver,
ascending colon, t = transverse
colon, c = caecum, a =

anterior portion (thorax), and
ta). The greater part of the
its lower end penetrates the
ribs. In the abdomen,
alimentary canal is shown --
and 149.
oesophagus tube. The stomach
on left to right across the
below the diaphragm. The

4 Digestion - the major stages

Animals need energy

Animals, as well as plants, need supplies of
energy for body processes. The energy which
animals need comes from complex organic
chemicals such as fat, proteins and
carbohydrates which they get from eating plants
or other animals. Thus, as you see in
digestion and (12), the sunlight captured by
photosynthesis is the source of all the energy
flowing through food chains and food webs.
Your appetite suggests to you that energy supply
is the most important in the body.



Example of the source of all our energy.

Feed glorious food

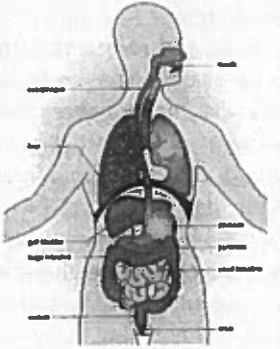
Perhaps the best way to see how
animals deal with food is to look
at how we as humans do it.
Although there are differences
from animal to animal, the basic
processes in the rest for all
animals.

Digestion (33) SA11

Digestion is all about taking in
large complex molecules, by
using physical and other means,
and breaking these down into
smaller, soluble molecules.

These smaller molecules can be
absorbed through the gut wall
and into the blood stream.

It is only when these small
molecules get into our blood
stream, that we can use them for
growth by the release of the
energy that they contain.

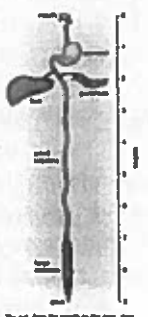


The main organs involved in digestion are shown here. This is called the
digestive system.

Swallowing table

These are some of the main stages in digestion

- Food is taken into the mouth, chewed and broken down into small pieces. It is mixed with saliva that lubricates the food, enabling us to swallow. The saliva contains the enzyme amylase for breaking down carbohydrates.
- The food is pushed by waves of muscular contraction, called peristalsis, down the oesophagus and into the stomach.
- Once in the stomach, the food is mixed with acid and the enzymes pepsin to start the breakdown of large protein molecules into smaller amino acids. The stomach acid also kills any bacteria on the food, thus making food poisoning less likely.
- When the food has been in the stomach for several hours it is released into a coiled pipe that is squeezed through from the small intestine. The small intestine is in fact very long, but is small in diameter. It is in the small intestine that the food is mixed with other digestive juices that continue with the breakdown of the food.
- One of these juices is from the pancreas. This contains other enzymes such as lipase for breaking down fat, amylase for breaking down carbohydrates and trypsin protease for breaking down some proteins.
- Bile is also added from the gall bladder. This does not contain enzymes, but instead emulsifies the fat by separating the large lumps into tiny droplets. This increases the surface area of the fat and makes it easier for lipase to break these down. (You see emulsions in the same way as smoothly by when you wash dishes. Emulsions of this type contain drops of oil which are so small they can't see them.)
- The food is now squeezed along the small intestine, which is about five metres long. The enzymes continue to break down the food and the small soluble molecules are absorbed into the blood stream.
- In the large intestine, which is only about two metres long, water is absorbed and the waste material is eventually eliminated from the stream, through the anus.



The gut, from the mouth to the anus, may be up to nine metres long.

Things to do

1. A biologist says 'If there were no plants, there wouldn't be any animals either.' Explain what she means.
2. State what the process of digestion does to the large molecules found in food.
3. Enzymes are sometimes called organic catalysts. Explain what this means.
4. State two reasons why the stomach has such a low pH.

SA 11

Figure 3.4 2002 Science: digestion

Refashioning social and semiotic domains: rhetoric and design

Representation and communication are distinct social practices. Representation focuses on my interest in my engagement with the world and on my wish to give material realization to my meanings about that world. Communication focuses on my wish or need to make that representation available to others, in my interaction with them. The dual frame of rhetoric and design permits both: rhetoric as the politics of communication and design as the translation of rhetorical intent into semiotic implementation. Rhetoric is oriented to the social and political dimensions of communication; design is oriented to the semiotic.

The rhetor has a political purpose: to bring about an alignment between her or his message, with its ideological position and the position of the audience with their ideological position. The designer has a semiotic purpose: to shape the message, using the available representational resources, for the best possible alignment between the purposes of the rhetor and the semiotic resources of the audience: mediating the features of what is to be communicated with the resources and characteristics of the audience.

Rhetor and designer share similar interests, while their tasks differ. The rhetor assesses the social environment for communication as a whole. She or he needs to

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shape their message such that the audience will engage with it and, ideally, assent to it. That is a political task. The designer assesses what semiotic – representational – resources are available, with a full understanding of the rhetor's needs and aims, in such a way that the rhetor's interests, needs and requirements, are met and make the best possible match with the interests of the audience, in an environment where the resources for doing so are usually inadequate. That is a semiotic task. As social environments change, so the designs of the message need to change. That is the motor which drives semiotic change *in line with* social change.

In most everyday communication, the two tasks and roles come together in one person, so that the rhetor is also the designer of whatever has to be designed in the process of communication: the social relations with the audience; the fit of modes, audience and message; the fit of the materiality of mode with the phenomenon to be represented and communicated. And designing, too, a communicational environment congenial to the audience's interest and for that which is to be communicated: for instance, designing 'everyday realism' for a younger audience in school or out; or a greater degree of abstraction for a scientific one; or with aesthetic considerations uppermost for particular audiences. Always too, designing matters of affect, whether lighting in a room at home, in an exhibition space, or for a film; designing the message also for the apt medium of dissemination and designing the spaces of display within that.

The exhibition at the Museum of London, 'London before London', shows – among many other objects, dioramas, tableaux, etc. – neolithic tools found in the Thames. They are displayed in glass vitrines, lit in a bright bluish light: much as they might be in an art gallery or in a jeweller's shop even. In the exhibition on Swedish prehistory at the Museum of National Antiquities in Stockholm, the lighting employed for the rooms dealing with the equivalent period is 'low', with greenish and reddish/brown tones. The one exhibition seems to want us to see neolithic artefacts as objects of beauty; and to think about the people who made them in that 'light'. The lighting of the other exhibition encourages us to see the period as dimly visible for us, a 'dark age' to us, even though it also displays artefacts of great delicacy and beauty in small glass cases integrated into the tableaux of the rooms.

The tasks of rhetoric and design are neither exceptional nor rare. They are part of the everyday, mundane, banal, unremarkable business of communication as much as at times part of 'heightened' occasions of interaction. Design is the servant of rhetoric – or, to put it differently: the political and social interests of the rhetor are the generative origin and shaping influence for the semiotic arrangements of the designer.

The perspective of representation, asks: 'What is it that I wish to say, write, gesture, 'express', at this point?', 'What is my interest at this point in giving material shape and form to my meaning?'. Representation is focused on myself and my interest; communication is focused on my interest in its relation to others. With representation there is, first, something to which I want to give material realization, making some meaning tangible in the world. Second, the 'take' on what I wish to represent arises out of my interest: interest directs my attention to something that now engages me, at

this moment. Third, my interest is shaped by my history, by my experiences over time in a set of communities and their cultures. And fourth, my interest is shaped by my sense of what is relevant to attend to in my social environment right here and now, in relation to this phenomenon or object. The question in representation is 'what are the best, the apt means for giving material form, material realization to my meanings'. That is the 'me part' of representation.

Communication, by contrast, is to put the meanings to which I am giving material shape as a sign (as text) into an interrelation with others in my environment: to make my meanings known to my assumed audience. Now my interest has shifted from 'me and the aptness of material forms to realizing my meanings' to the environment of communication and to those who are participants in that: *me with others*. The questions change: 'What is my relation to those with whom I am communicating?', 'Are they members of my more immediate social group or are they more distant?', 'What are the relations of power and how do I need to acknowledge them in my signs?', and 'How ought I to adjust and shape my representation in relation to the interests of my assumed interlocutors?'. The issue is the rhetorical one: 'How can I be most effective in disseminating my meaning so that others will engage (positively) with it?'

Both representation and communication are social processes, but differently so. Representation is focused on me, shaped by my social histories, by my present social place, by my focus to give material form through socially available resources to some element in the environment. Communication is focused on social (inter-)action in a social relation of *me with others*, as my action with or for someone else in a specific social environment, with specific relations of power. Interest remains central, but its focus, its direction and attention shifts: from 'me and my focus on aptly representing some entity or phenomenon to my satisfaction', to 'me in inter-action with others in my social environment and my focus on success in engaging and persuading others'. Representation is oriented to self; communication is oriented to an other. Representation takes place in a social environment; communication constructs a social environment. Signs(-as-texts) are always shaped by both kinds of interests: by my interest in aptly realizing my meaning and my interest in aptly conveying it to an Other.

Communication is a quintessentially social activity. It may be that as humans we are defined by our need to communicate as much as by our abilities to do so. Certainly, culture is an effect, a result, of communication and not possible without it; in turn, communication is framed and shaped by culture and changes culture in the process of communication. Germanic languages have words such as: *mitteilen* in German ('mit' = with; 'teilen' = to share) – 'to have and share something in common with you, to make you and me the same in respect to some knowledge or feeling'; *Mitteilung* in German – 'sharing something about myself with you in respect to this message'; and *Medalende* in Swedish – 'letting you participate in a part of me'; as crude translations. This may be so basic and common a trait for higher-order mammals as to qualify as definitional of the species, human as well as others.

Being social, the conditions for representation and communication change with changing social conditions; at the same time, representation and communication constantly change social conditions, though each differently so. The social conditions set the ground, they lay out the arena, so to speak, for representation and communication. Communication constantly (re)constructs this social ground, the social relations and the social environment. In this, it changes the environment and in doing that it always potentially changes distributions of power. Potentially at least it makes communication politically problematic. Representation constantly remakes the resources for making meanings and, in the remade resources, shapes those who remake them. That is the effect of representation in the constant self-making of identity. Through their effects on power and identity, communication and representation are both political processes; both alter existing arrangements of power, though each differently.

Representation happens in a social environment. As the realization of my socially made interest, active in the world, it constantly changes the resources and the potentials for configuring how the world is construed. In changing the resources for representing the world, it changes what seems at any one moment to be settled knowledge. That makes representation ontologically and epistemologically problematic. Communication reshapes, (re)constructs the social environment; it changes the potentials for action, of agency, of those who are participants in the process of communication. That makes communication politically problematic. Signs and sign-complexes are shaped by both and hence they are always problematic for knowledge and power.

The effects of communication are both more overt and more likely to be subject to policing than is the case with representation. 'Policing' may range from an unnoticed adherence to conventions which have become 'naturalized', 'made mine'; to a strong enforcing of them, so that I hesitate to incur the penalties of contravention; to outright prohibition on engaging with or producing specific messages (censorship), with penalties for transgression.

It follows that members of a community adhere to or challenge conventions for quite different reasons. 'Normal times' might be those when conventions are known, are 'second nature', by and large regarded as essential and generally adhered to, as a matter of course. No overt policing is needed. Where they are not adhered to, penalties may take the form of disapproval; in less normal times, penalties take severe form, where power is used overtly to force adherence. A banal example might be 'littering'. At bottom, 'littering' is a matter of the boundaries of 'public' and 'private', of 'purity' and 'dirt'; while the private space is kept clean, the individual feels no responsibility about the public space (Douglas, 1984). Every act of discarding a sweet wrapper by dropping it on the ground is in that sense an act of marking and communicating boundaries of public and private. There are, even now, societies in Europe where, by and large, these boundaries work such that 'littering' is not a significant issue. It is held in check by public disapproval and even more by internalized boundaries of 'public' and 'private': 'public space' as 'our collective space' and

therefore to be kept clean. In the UK, public disapproval no longer works as a means of policing (what are now non-existent internalizations of) boundaries of 'public' and 'private': the notion of 'our space' has broken down with the breakdown of a sense of 'a public'. The British state responds by criminalizing such actions (through the ever more frequent issuing by courts of 'ASBOs' – Anti-Social Behaviour Orders). An individual 'issued with' an ASBO is constrained not to engage in certain actions, littering for instance; or to stay away from certain spaces. In other European societies it may still be treated as a social misdemeanour and dealt with in that fashion. From this we could attempt to characterize social conditions, construct social taxonomies and calculate their likely social and political effects, and from that assess conditions of communication.

An important question is whether there is a need to distinguish between presentation and representation. Is every sign that we make a re-presentation in some way of (a) prior sign(s)? Is every text a remaking of prior texts? At one level the answer has to be 'yes'. The model of communication that I am proposing here assumes that communication begins as the response to a prompt. There is the possibility of seeing sign-making either as constantly transformative, as a constant remaking – the position which I adopt; or we assume that sign-making, at times, proceeds from a 'fresh start'. In the one case we acknowledge that our utterances work on the 'ground' that has been established by the form and the content of the prompt we have received. By doing so we see ourselves as always connected to, integrated into, the (prior) actions of others. In the other case we assert that we might set the ground newly, in our own interest, in our own right; using, of course, existing cultural resources of all kinds, but using them to set our agenda newly. The concept of representation places us in the ceaseless chain of semiosis, which we reshape in our signs and texts, but reshape within the limitations set by that chain. The concept of presentation suggests that we are – at least at times – able to step out of that flow and may wish to start with our 'own' agenda.

This is a point of ideological, social and personal choice: to see ourselves immersed in the ceaseless flow of semiosis – both inner and social – and yet wish to frame an engagement with the world and its presentation in such a way that our agenda, our concerns, our interests newly set the ground for an ensuing chain. Here ideological choice shapes the theoretical frame.

4 A social-semiotic theory of multimodality

From a linguistic to a multimodal social-semiotic theory of meaning and communication

Multimodality names both a field of work and a domain to be theorized. Anyone working multimodally needs to be clear what theoretical frame they are using; and make that position explicit. Social-semiotic theory is interested in meaning, in all its forms. Meaning arises in social environments and in social interactions. That makes the social into the source, the origin and the generator of meaning. In the theory here, 'the social' is generative of meaning, of semiotic processes and forms, hence the theory is a social-semiotic one.

The core unit of semiotics is the *sign*, a fusion of form and meaning. Signs exist in all modes, so that all modes need to be considered for their contribution to the meaning of a *sign-complex*. The genesis of signs lies in social actions. In *semiosis* – the active making of signs in social (inter)actions – signs are *made* rather than *used*. The focus on sign-making rather than sign use is one of several features which distinguishes social-semiotic theory from other forms of semiotics. In a social-semiotic account of meaning, individuals, with their social histories, socially shaped, located in social environments, using socially made, culturally available resources, are agentive and generative in sign-making and communication.

There are several, relatively distinct strands of Social Semiotics, which derive from the writings of Michael Halliday (1978, 1984). Viewed from a relatively abstract level, they tend to differ in relation to one issue: whether they base themselves on the *linguistic* or the *semiotic* perspective of Halliday's theory. While there is agreement both in broad outline and in much detail among proponents of either of the two possibilities, the differently placed emphases do have significant effects. The theory used here adopts the *semiotic* perspective of Halliday's theory. Rather than attempting to construct a compromise view, from here on I use the label 'Social Semiotics' to refer to the approach set out in Hodge and Kress, 1988; Kress 1993, 1997a, 2003; Kress and van Leeuwen, 1996/2006; Kress and van Leeuwen, 2001; and, in most respects, van Leeuwen, 2005). It rests on several fundamental assumptions: signs are always newly made in social interaction; signs are *motivated*, not *arbitrary* relations of meaning and form; the motivated relation of a form and a meaning is based on and arises out of the *interest* of makers of signs; the forms/signifiers which are used in the

making of signs are *made* in social interaction and become part of the semiotic resources of a culture. The relation of form and meaning is one of *aptness*, of a 'best fit', where the form of the *signifier* suggests itself as ready-shaped to be the expression of the meaning – the *signified* – which is to be realized. *Aptness* means that the form has the requisite features to be the carrier of the meaning.

In Figure 4.1 below, a circle is used – by a three-year-old boy – as the *signifier* to express the *signified* 'wheel'. The use of a circle to mean 'wheel' exemplifies the notion of *aptness*. In the drawing, several circles-as-wheels serve as an *apt signifier* to express the *signified* 'car'.

Figure 4.2 is a drawing by a six-year-old boy of two footballers 'squaring up', to use the vernacular. The positioning of the two figures is an *apt signifier* to express a *signified* of 'confrontation' or 'opposition'. The drawing is a *sign-complex* made with the visual mode foregrounded and carrying major functional load. Like all signs and sign-complexes it is a *metaphor*, newly made. In a social-semiotic take on representation and communication, all signs are *metaphors*, always newly made. In its 'realist' orientation this connects with aspects of the currently popular theory of metaphor of Lakoff and Johnson (1982; also Lakoff, 1987); in its firm social basis however, Social Semiotics departs from the cognitivist approach of Lakoff and Johnson.

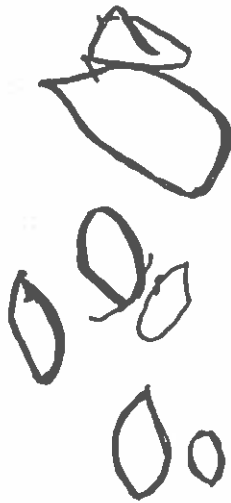


Figure 4.1 'This is a car'



Figure 4.2 Football: 'Arsenal vs. Chelsea'

Linguistics, pragmatics and a social-semiotic approach to representation

Before elaborating this approach, I briefly want to 'locate' it among a few disciplinary relatives, to provide some orientation. Given that thinking about meaning has in many ways been shaped by a *linguistic* understanding of language, it might help clear the decks – so to speak – of some longstanding notions around meaning and communication to sketch some differences in focus between a *linguistic*, a *pragmatic* and a *social-semiotic* 'take' on representation and communication.

The grip of the 'linguistic take' on communication rests on the long history of the study of language in European intellectual traditions. Like so much of 'European knowledge', it builds on insights from 'the East': in this case traditions going back to the grammarians of Sanskrit (e.g. the grammarian Panini, between 500 and 400 BC). These insights were transmitted by various routes – via Greece to Rome; via Arabic scholarship to medieval Europe – and much transformed along the way. In the Sanskrit grammatical tradition, concern for the 'purity' of transmission of sacred texts led to a need to 'fix' language as a necessary guarantor for that security of meaning in their transmission. In many banal but socially significant ways something like that attitude remains, adapted to contemporary givens. Now, reliance on the stability of language is seen as essential in relation to significant public texts, canonical or other. Certainty about the reliability of *linguistic* meaning is seen still as the guarantor of rationality and knowledge, of all that was and is seen as quintessentially human. Nor is the notion of purity far from current public commonsense, as witness the outrage caused by changes to 'conventions'; of which panics about the moral and social effects of 'texting' are a current instance.

If language guaranteed meaning and rationality, then theories of language could also be relied on to provide tools to explain what needed to be understood about central issues in representation; as indeed about much else of value in culture and society. In that way language and understandings about language have long since come to provide 'naturalized' access to theories of meaning and communication.

To sketch some differences of linguistic, pragmatic and semiotic approaches, I will use an example from my first years of teaching, in the early 1970s, at a 'new' university in the UK. It was not uncommon – things have become 'tighter' since – for students to ask for 'an extension' to complete some work. The approach was usually something like:

'I wanted to ask, could I have an extension for my essay?'

At that time I was teaching linguistics – undergraduate courses in (transformational) syntax, semantics, sociolinguistics, psycholinguistics, stylistics. I was trying to understand regularities of language use and was not comfortable with the 'correlational' approaches à la William Labov (1966, 1972), then dominant in sociolinguistics. To me they did not offer a sufficient explanation of what it should be possible to know and say about such utterances (e.g. 'in this environment, this linguistic or phonetic

form correlates with these social features' or 'the occurrence of this form points to/indexes this social environment'). Correlations show *links* but provide no *explanation*.

The form of this oft repeated request puzzled me. It seemed that power and power-difference were the key to understanding what was going on and would lead to understanding variations in language use. My question at that time was: how can I explain the social meaning of this simple yet complex request 'I wanted to ask, could I have an extension for my essay?' I had other, more specific questions: 'How is it that *past tense* (the morpheme *-ed*), whether in 'wanted' or in (can + ed) ⇒ *could* can serve as a sign of (relations of) power?'. A grammatically/syntactically founded *linguistic* approach can readily provide a *description* of clauses and their relations in this spoken utterance; or of the 'sequence of tenses'. It can indicate what elements and what rules of 'grammar' are being used: the use of the past-tense morphemes, for instance. The categories of a syntactic/grammatical account, e.g. *clause*, *subject*, *phrase*, *sentence*, or *adjective*, *tense-marker*, *noun*, can readily be used to describe formal aspects of that utterance. When this approach is used, the focus is on the *description of form* and of *formal relations*.

By contrast, a *pragmatic* (or *sociolinguistic*) approach asks: 'Under what conditions, when and where, are these forms used and what tend to be likely effects of their use?'. That provides descriptions of the environments of use and of the conditions in which such forms tend to appear. It describes the social/linguistic roles of participants; their status and relations of power; it can describe effects by using categories such as *face*, *repair*, *politeness*. To some extent the focus is on *correlation*: this linguistic form *correlates* with that social context. The orientation is to use, to conditions and environments of use and to some extent to effects. It can suggest that when the conventions of the correlation are not adhered to, there is a disturbance, which requires repair.

A *social-semiotic* approach asks: 'Whose interest and agency is at work here in the making of meaning?', 'What meaning is being made here?', 'How is meaning being made?', 'With what resources, in what social environment?' and 'What are the meaning potentials of the resources that have been used?'. 'How can *past tense* be an indicator of power?', 'How is it that a form that signals distance in time can signal social distance, a "distance" produced by difference in social power?'. There is an orientation to the interests of the sign-maker ('distancing', making her/himself 'safer'); to the environment in which meaning is made (the relations of power which obtain and the sanctions which exist in not acknowledging power); to meaning and to the semiotic/cultural resources which are available for the realization/materialization of meaning as a motivated sign.

That explains some of the social-semiotic aspects. It does not deal with the resources used, the modes. One response might be: 'well, the only mode here is speech, the linguistic account is sufficient, nothing else to say.' A *linguistic* account, however, is partial in two ways: first, in terms of what linguistics recognizes as significant about speech; and second, in terms of what it does or doesn't tell us about other modes

involved. As far as the mode of speech is concerned, this written transcription of the spoken utterance 'I wanted to ask you, could I have an extension for my essay?' does not tell us whether it was spoken with a rising or a falling intonation on 'for my essay?'; whether it was said with a markedly falling intonation on 'could' – to mean 'please, I am pleading with you!'; or whether either of these versions was said with a smile, a cheeky grin, a serious or embarrassed expression? Did the speaker look at the ceiling or did he or she look straight at the teacher? Did he or she come right into the room or did they stay wedged in the half-open door?

A linguistic account of speech is partial; even if it is attentive to intonation, as Hallidayan linguistics for instance is; or if it provides a careful transcription of hesitation or of rhythm – it leaves out many other essential aspects of meaning. The focus on the *semiotic* category of the *mode of speech* forces attention to all signs made in speech – rather than the *linguistic* construct 'spoken language' and the categories which that supplies. The *semiotic* category of *mode* attends to the potentials for making meaning of *sound-as-speech* differently to the *linguistic* category of speech. The other point here is that if a linguistic account of this *interaction* is seen as sufficient, necessarily it cannot give attention to other modes which are in play: *gaze*, *facial expression*, *gesture*, *spatial positioning*.

Each of the signs at issue here is *motivated*: the positioning in the half-open door as much as the shape and the extent of the intonation contours. The *ensemble of signs* as a whole makes meaning: the distancing *past tense* coheres with the *positioning* in the half-open door; as does the tentativeness of the *rising intonation*. The individual signs in the ensemble can of course be used to contrast, to contradict, to create tension: the distancing of the *past tense* can be contrasted with the person walking right in to the office; or with the marked fall in intonation which turns the grammatical form of *interrogative* into the *semiotic* category of *statement*.

As with the sign of 'circle-wheel', *motivation* here means the use of a form which, in its shape, is 'ready' – which 'mirrors' or 'parallels', so to speak – the 'meaning shape' of what is to be meant. Here, a (grammatical) indicator of *temporal distance* (the past-tense morpheme -ed) is used as the means for 'meaning' *social distance*, the distance of power. It is possible to call that an *iconic relation*: distance in time 'is like', 'is a likeness of', can 'stand for' distance in social positions. There is a good reason, a *motivation*, for using this form for that meaning.

A further difference between the three approaches lies in what I call the 'reach', the 'extent of applicability', of the approaches. A linguistic approach is limited to the description of linguistic forms and their relations. As *sociolinguistics*, its 'reach' stops broadly, at the description of *conditions* and *correlation*. A pragmatic approach concerns itself with correlations of *variations of use* with *variations in environments*. That is, variation in meaning is linked to variation in context.

Necessarily, the linguistic approach has nothing to say about other modes in making meaning; though the principles of pragmatics do not exclude an interest in extending its reach to other modes (Morris, 1970). In some sense both linguistics and pragmatics recognize the presence of other modes – in terms such as 'extra-linguistic',

'para-linguistic', 'non-verbal' or in different kinds of acknowledgement to features of 'context'. That, however, is a recognition of the phenomenon in the same moment as its instant dismissal; a backhanded theoretical compliment: I notice you and you're not significant enough for me to bother.

Of course, as a generalization this is too sweeping. There are and have been clear exceptions (Hjelmslev, 1961; Halliday, 1978). Yet in a 'disciplinary common-sense' – if such a thing exists – it is not too far off the mark. Often this position is accompanied by an assumption that, in any case, images are organized like language, as witness terms such as 'visual literacy', 'visual language'. End of story.

Take the example in Figure 4.2. In a social-semiotic multimodal account of meaning, all signs in all modes are meaningful. Linguistic theory can tell us very little as far as the sign-complex of Figure 4.2 is concerned. It can make a comment on the written caption; and nothing beyond that. The 'core' of this sign-complex is beyond the reach of any linguistic theory. A social-semiotic theory attends to general principles of representation: to *modes*, *means* and *arrangements*. It can, for instance, 'say' something about meaning relations and their instantiation in image through the *spatial arrangement* of visual elements; it can elucidate a *syntax* of this visual representation – the meaning-potential of *spatial orientation* of the players standing face-to-face; the use of *colour* as an *ideational* resource, to identify the teams; of *proximity*, that is, the use of *distance* as a *meaning-resource*; about *affect* (realized by the distance at which the players stand); their *facial expression*; down, literally, to the respective size and the prominence of the studs on their boots. Should we want to use such dichotomizing terms, we could say that *affect* and *cognition* are equally and simultaneously present; though much more significantly, social-semiotic theory allows us to challenge that dichotomy, via this example for instance.

This is a multimodal text; the modes in use are *writing*, *image*, *number*, *colour* (and *facial expression*). Social Semiotics is able to say something about the *function* of each of the modes in this multimodal text; about the *relation* of these modes to each other; and about the main entities in this text.

To summarize: *linguistics* provides a *description of forms*, of their *occurrence* and of the *relations between them*. *Pragmatics* – and many forms of *sociolinguistics* – tells us about *social circumstances*, about *participants* and the *environments of use* and *likely effects*. *Social semiotics* and the *multimodal* dimension of the theory, tell us about *interest and agency*; about *meaning-making*; about *processes of sign-making* in social environments; about the *resources* for making meaning and their *respective potentials* as *signifiers* in the making of *signs-as-metaphors*; about the *meaning potentials* of *cultural/semiotic forms*. The theory can describe and analyse all signs in all modes as well as their interrelation in any one text.

In relation to the example of the spoken request, Social Semiotics can say: *power* is about relative social position; it can be expressed as a *kind of distance*; *distance in time* can be used to signal *social distance*, the *social distance of power*. The *degree of power* felt or to be indicated can be regulated by a nuanced and layered use of *apt signifiers* (for instance 'I had wanted to ask...'; 'I wondered, could I possibly ask if

you'd mind, if . . .') to make ever more complex/nuanced signs of relations of power. *Distance in time* as signifier contains an ambiguity, which allows the less powerful speaker both to acknowledge the *distance in power* between him/herself and the addressee and a means – being distant in time (rather than in space) – of temporal distancing from the request; in effect saying 'I am telling you something about a past wish, about something that I had wanted to do then, whereas actually, now, I am no longer in that position.' That is, the request can be expressed and simultaneously semi-denied in this (weakened) form; it is modalized. Being modalized (Halliday, 1967, 1984; Kress, 1976; Hodge and Kress, 1979) it offers the recipient the opportunity to adopt one of the several possible readings. In linguistics this is usually treated as an instance of *ambiguity*. In the sketch of communication developed in Chapter 3, the utterance/message provides a *ground* which can readily be framed as a *prompt* in either direction, according to the interpreter's design.

In the case of Figure 4.2, Social Semiotics can say which mode is *foregrounded*; which mode carries *major informational weight* (*functional load*); which mode has *what function* in the overall textual entity (*writing as caption, image as major and number as minor carrier of meaning*). In the mode of *image* it can describe the *arrangement* of the entities of the image and their meanings – of 'opposition', of 'confrontation', of 'challenge', and so on.

Horses for courses: apt theories, useful framing

Theories, of course, are just that, *theories*: multiple, competing, often internally contradictory. Theories specify their domain, more or less explicitly and precisely; they provide categories to describe and analyse the phenomena which they construct. Language, more maybe than other social phenomena, suggests itself 'naturally' as a metaphor of the social or the political – or of their negation; and linguistic theories act as potent metaforms.

Among linguists, Noam Chomsky, a trenchant opponent of political oppression in the twentieth century, is the one who has been most insistent on separating language from social and political concerns – ever more so as his political writing has become more despairing. Yet it is not difficult to see his *politics* – affirming the equal dignity of every human – articulated in his linguistic theory through his assertion of the 'universality', the common characteristics and capacities of human brains everywhere and at all times. This (seemingly) asocial theory is a potent metaphor of his political position. A similar case can be made for the linguistic theory of Michael Halliday, though in the opposite direction. Halliday's assumptions about the generative power of 'the social' explain the close fit between social organization, human action in social environments and the meaning potential of linguistic forms and processes. That analytic edge was used in Critical Linguistics (Kress and Hodge, 1979; Fowler *et al.*, 1979; Hodge and Kress, 1993) as the tool for social critique: the social agent's capacity to exercise 'choice' from a complex system of *linguistic* meaning potential in the context of a specific social environment.

Shifting the frame only slightly, the choice of a theory from among the range of always ideologically founded theories is itself necessarily ideologically motivated. Positioning is unavoidable; positioning is the result of choice from among a range of possibilities; that choice is socially meaningful – it is ideologically. That is the case with Social Semiotics no less than with other forms of semiotics. It is not to lapse into relativism but to acknowledge that it is impossible to escape 'positioning': socially, politically, ideologically and for me, in the end, most significantly, ethically. That inescapable choice of positioning should not, however, be confused with the very different choice of selecting a theory constructed for one domain and applying it in another. That is a quite different matter: as when a *linguistic* theory and its categories are used to describe *multimodally* constituted texts. The descriptive, analytical and ideological apparatus of the prior theory is brought along and leads, necessarily, to a mis-description of the domain to which it is now applied but for which it had not been developed.

(The choice of a) theory carries, however implicitly, potent messages about what we take to be conceptions of culture, the relations between 'representation' and culture and the fundamental characteristics of culture itself. A full theory of meaning needs a rich notion of culture and of meaning.

Multimodal Social Semiotics theorizes meaning from three 'perspectives'. The overarching perspective is that of *semiosis* – making meaning; its categories apply to all representation, to all communication and to all the *media* of communication. From the perspective of *multimodality*, the theory deals with issues common to all modes and to the relations between modes. Here there are questions such as: 'What kinds of theoretical and actual entities are common to all modes and to all the types of relations between them?'. In the third perspective, of dealing with a *specific mode*, the theory has categories that describe forms and meanings which are appropriate to the specificities of a given mode – its material affordances, its histories of social shaping and the cultural origins/provenance of that mode. As an instance, the mode of *speech* in English has the semiotic category of *intonation*. Even though the modes of *soundtrack* or *music* also use the material of sound – with its affordance of pitch variation – these modes do not have the category of intonation; nor of course do modes which are not time-based or which do not use sound. Another case might be looking for – or, worse still, finding – 'verbs' or 'nouns' or 'clauses' in *image*, in *music* or in *gesture*. In practical terms, the three perspectives are difficult to keep apart; yet, for certain descriptive and analytical purposes it is useful and at times necessary to do so.

Most (mainstream) linguistic theories separate meaning and form – *syntax* being the study of form; *semantics* being the study of meaning; *pragmatics* being the study of use. Multimodal Social Semiotics deals with entities in which meaning and form appear as an integrated whole, a *sign*. As signs are always newly made according to the interests of sign-makers in specific social environments, there is neither need nor place for a *theory of use*, that is, for *Pragmatics*. *Use* is, simply, a normal part of the making of every sign. A theory of use is redundant in an approach which has the sign-making and the sign-maker at its centre: the sign, after all, is made in and for the

conditions of its use. Signs are made in a specific environment according to the sign-maker's need at the moment of sign-making, shaped by the *interest* of the maker of the sign in that environment. The environments and circumstances of 'use' are, therefore, always an absolutely integral part of (the making of) the sign: they are at the centre of the concerns of the theory. The signs made are as precise as it is possible to make them to realize the sign-maker's meaning.

There are other theoretical consequences. If signs are precise, that leaves the category of *connotation* without point; it is revealed as an attempt to patch up a problem at the core of a problematic theory; a theory, that is, which had no plausible account of meaning-making. Similar arguments apply to enterprises such as *Semantics* and *Stylistics*. Clearly at times it is important to focus on *meaning*; and *style* is an important component of a social-semiotic multimodal theory. Yet the need or justification for (sub-)disciplines such as *stylistics*, *semantics* has gone: *style* is an outcome of successive choices of the apt relation of form and meaning in the making of signs and sign-complexes; with meaning at the core of sign-making. Similarly, the concerns of *sociolinguistics* vanish when all occasions of sign-making are embedded in and shaped by social environments.

The motivated sign

The sign is the central concept of semiotics. In the sign, meaning and form are fused in one entity. In a Social Semiotic theory, signs are made – not used – by a sign-maker who brings meaning into an apt conjunction with a form, a selection/choice shaped by the sign-maker's *interest*. In the process of *representation* sign-makers remake concepts and 'knowledge' in a constant new shaping of the cultural resources for dealing with the social world.

The two main strands of Semiotics which have dominated in 'the West' are based on the work of one or both of two major figures: Charles Sanders Peirce (1857–1913), an American philosopher; and Ferdinand de Saussure, a Swiss linguist (1839–1914), both teaching and writing in the latter part of the nineteenth century and into the very early part of the twentieth. The Peircian model offers three crucial emphases: a *classification of signs* based on the relation of signs to 'the world'; the process of *semiosis*; and the category of the *interpretant*.

In Peirce's account of signs in use – the process of *semiosis* – 'recipients'/ *interpreters* of a sign make their sense of the sign they 'receive': they form an *interpretant* of that sign for themselves. The *interpretant* is the meaning of that sign for the recipient. 'Readers' are agentive and transformative in their semiotic engagement with signs. Once formed, the *interpretant* becomes (as the new *object* in Peirce's terms) the point of departure for a new sign, leading to an ongoing, constantly transformative *chain of semiosis*. In this process the 'reader'/ 'recipient' as *interpreter* is the maker of new signs and, in that, is the remaker of the semiotic material of the culture. It is a process of a ceaseless remaking of meaning, of *interpretants* newly formed in the transformative engagement with a prior sign.

Peirce classified signs according to the characteristics of the relation which they have to that which they represent in the world: an *iconic* sign 'resembles' what it represents – the circle as *wheel*; an *indexical* sign 'points to' (as in 'deixis') an object or event – Peirce's example was that of smoke as indexing fire; a *symbolic* sign 'stands for' a conventionally agreed relation between a form and an object or event (the Red Cross/Red Crescent as symbols for a humanitarian organization (Colapietro et al., 1966)). In his theory, the *function* of the sign does not – except in the case of *symbolic* signs – stand in an *arbitrary* relation to the world, but is shaped in and by those relations.

Saussure's emphasis, by contrast, was on relations of the 'outer' world to an 'inner', mental world; and on the inner relation of form and meaning in the sign. A relation of *reference* is established by an individual between a phenomenon in the outer world and its mental representation, the *signified*. In that inner mental world, the *signified* links with a *signifier* to produce a sign; the sign is expressed in an external, outwardly audible, visible or otherwise materially tangible form. In Saussure's sign, *signifier* and *signified* are linked in a relation which is *arbitrary* and bound by *convention*.

Both *arbitrariness* and *convention* point to social power, though in distinctly different ways: *arbitrariness* as an indication of a social power which is sufficiently strong to tie any form to any meaning; and *convention* – the effect of *social power over time* – as a social force which acts to keep signs *stable*, a stabilizing force for the community which subscribes to it. In this account, the actions of individuals cannot change signs or the relation of the sign to the system of signs (Hodge and Kress, 1988).

The Peircian approach assumes change based on the actions of individuals in the formation of the *interpretant* which becomes the object of the next sign. The Saussurian account rules out individual action as a possible means for change: the system is stable, held in place by the force of collective social power, naturalized as convention. A social account of meaning based on the significance of the agency of individuals, is entirely at odds with a conception of an arbitrary relation of form and meaning, established and held in place by convention.

The example used by Saussure to make his point was a lexical one, the French word *arbre*. There seems no reason, he suggested, why the *sound shape* [a:br] should act as the *signifier* of the *signified* – let me represent it as 'tree-ness'. In English, the *signifier/sound shape* [tri:] is linked with that same *signified*; as is [baum] in German. The relation between *sound shape* and *meaning* is an arbitrary one. That seems plausible enough.

Wittgenstein (1935) extended the scope of this reasoning, stressing the force of convention by introducing the example of a (chess) *game*. Assume, he suggested, that while we were setting up a game of chess, we discovered that a piece was missing, a pawn or a castle say, then we could use any small object, a button maybe, to replace it. This seems to confirm both the arbitrary relation between form and meaning (the *function* of the chess piece) and the strength of convention, agreed on by both players for the duration of the game.

We can push his example further. If the black pawn was missing and we had some white and some black buttons, it is likely that we would use a black button to stand in for the black piece even though the notion of arbitrariness suggests that the choice of a white button would do just as well. At this point we have made two decisions that are not arbitrary: the decision to use a button to stand for a chess piece and the choice of a black button. The former rests on the convenience of shape and size – a button fits more easily on a chess board than, let's say, a saucer; the second rests on a central feature in the game, namely (likeness in) colour. Both decisions are held in place by convention: my chess partner and I have agreed on these decisions for this occasion and decided to adhere to them for the duration of this game.

Had we mislaid two black pieces of different value, say a pawn and a castle and we had black buttons of different size, we would use the larger button to stand in for the piece with the higher value: (*physical*) size of button standing in for (*size-as-value*) of the piece. If both the black and the white parties were missing a pawn, then there would hardly be choice about the colour of buttons: the game would become quite difficult to play if we replaced the missing white piece with black buttons and vice versa. It seems clear that here at any rate the principle of arbitrariness won't work.

What seems like *arbitrariness* and what is *convention* are socially motivated, by distinctly different principles. Choosing 'black' in the first example meant selecting 'colour' as the criterial aspect of the object to be represented; choosing 'size' in the second case meant taking 'value'(-as-size) as criterial. To be effective, whether in the game of chess or more so in the social game of language – as Wittgenstein put it – both selections need the joint agreement of the players. But the decision also needs to work effectively for playing the game: using white buttons for black pieces and smaller buttons for more valuable pieces would work against the necessary 'transparency' of signs.

That is crucial. The notion of *arbitrariness* goes directly against the notion of the sign-maker's *interest* in the making of signs and meaning. *Arbitrariness* (in Saussure's conception of it) and *motivation* each point to social principles: arbitrariness points to the strength of social power as convention and *motivation* points to *plausibility* and *transparency* of the relations of form and meaning in the sign. The apt relation of material form and cultural meaning is an expression of the sign-maker's interest in two ways: 'matching' form and meaning satisfies the sign-maker's wish for an apt 'realization' of their meaning and that, in turn, is needed crucially in communication as a guide for the recipient in their *interpretation*. *Convention* points to social agreement and power in sign-use. *Motivation* points to the need for *transparency* as a means towards shared recognition in the relation of form and meaning in communication.

To put this more bluntly: in Saussurian semiotics, if I want to be understood, I do so by learning the social rules of use of the semiotic resources which those around me know and use. If I don't know them, I'm in trouble. In Social Semiotics, if I want to be understood, by preference I use the resources that those around me know and use to make the signs which I need to make. If I am not familiar with those resources, I make signs in which the form strongly suggests the meaning I want to communicate.

Many of us have found ourselves in the latter situation and survived, using signs of gesture, of drawing, of pointing. Those signs however have to be as transparent, as 'iconic' as I can possibly make them.

Multimodal Social Semiotics does not make use of Peirce's well-known tripartite classification of signs, as *iconic*, *indexical* and *symbolic*. His three terms rest on motivation in the relation of form and meaning, though differently in each case; and that includes the *symbolic* sign. Theoretically, to allow for 'little bits of arbitrariness' here or there, allowing maybe for the odd arbitrary sign in some environments is a profound mistake. The effect is to totally undermine the power and usefulness of a theory of the motivated sign – whether in the direction of the possibility of refutation of the theory itself or in the use of the notion as a heuristic device to hypothesize about meaning. Assuming the position that all signs are motivated conjunctions of form and meaning forces me to attempt to uncover motivation, in all cases. Once we do that, we begin to realize that the sign of the Red Cross (the Red Cross flag being a reversal of the colours of the Swiss flag) might not have been unrelated to Swiss neutrality, as a *signifier* of the *signified* of being an 'uninvolved, neutral party', 'an impartial organization of assistance' – not to mention the nationality of the founder of the organization. Nor is it implausible, given the religious meaning of 'cross', that in some societies the Red Crescent was chosen as the apt signifier for them. In that latter case it is the 'cross' as religious symbol rather than as reminder of the Swiss flag which seemed criterial.

I have not checked, but it would be revealing to find what differing versions of the Red Cross/Red Crescent there are, and what, in each case the principle of motivation is.

The inner constitution of the sign reveals the *interest* of the maker of the sign. That is of the greatest significance as a heuristic and as an analytic means, whether straightforwardly in ordinary everyday interaction or in forms of research. If the 'shape' of the signifier aptly suggests the 'shape' of the signified (e.g. the circle as wheel), it allows an analyst – whether in everyday interaction or in research – to hypothesize about the features which the maker of the sign regarded as criterial about the object which she or he represented. Positing that relation between 'sign' and 'world' is crucial; it opens the possibility of a path to understanding what in the phenomenon or object to be represented was treated as criterial by the maker of the sign at the moment of representation. That can lead to an understanding of the sign-maker's position in their world at the moment of the making of the sign. Such a hypothesis is of fundamental importance in all communication – whether framed rhetorically as critique or as design.

The everyday, the banal and the motivated sign

Saussure's mistaken assumption that the relation of *signifier* and *signified* is an arbitrary one was, as is all theory, a product and realization of the social conditions of his time. Here are three objections. First, *arbitrariness* takes no account either of

the patent facts of the histories (of change) of semiotic resources (see in this respect Raymond Williams's (1985) *Keywords*) nor of the facts of contemporary sign-making practice in every instance. Second, it rests on a confusion on Saussure's part about the characteristics and the levels at which *signifier* and *signified* operate. Third, it denies agency to those who make meaning in making signs: in wishing to buttress one pillar of his social theory – the force of collective power; or the power of the collective – he ignored the source of that power, namely the agency of individuals in their action collectively. For much the same reason – the wish for a plausible social theory which does not negate the energy and significance of individual action – I stress the agency of socially formed individuals acting as sign-makers out of socially shaped interest with socially made resources in social interactions in communities.

To deal with the last of these first: observation of semiosis at any level shows constant change rather than rigid conformity as repetition or 'copying' – whatever the modes which are involved. Every example in this book provides an instance of this. The second objection rests on a confusion on Saussure's part: the *signifier* of 'tree-ness' is not a *sequence of sounds*, that is, not [a:br:], but an existing *lexical-item-as-signifier*, 'tree', used in its potential for becoming a new sign. The meaning-potential of the signifier 'tree' is the sum of all the instances in which I have encountered the sign tree as a signifier: that enables me to make a prediction about its aptness as a signifier for the new sign that I want to make row. The signified TREE and the signifier 'tree' are elements at the same level and of the same kind: not as in Saussure's assumption where one is a *semantic* entity and the other is a *phonetic* one, one an entity of meaning and the other an entity of sound.

Assume I have bought a pot plant, a ficus. I know nothing about the plant's natural habitat or the dimensions that it reaches in its natural habitat (in Australia it is a rainforest tree which grows to huge expanse and height): my plant is about 50 cm in height. Should I call what I have bought a 'bush' or a 'shrub' or maybe something else? Or is it best described as a 'tree'? At the point of searching for a name, the signifier that I am looking for is not a string of sounds but a 'label', a name, that I have encountered before, sufficiently often to know that its meaning-potential – a woody, perennial plant, of significant size with a strong, usually single stem – best captures what this thing that I need to name is. My question is not 'will [shrub] sound best for this plant, or maybe [bush]?' Rather, my question is: 'Where does this plant 'belong'? 'Does it belong with flowers, bushes, shrubs, trees?' and: 'What lexical entity will serve as an apt signifier for this plant in terms of its present characteristics or in terms of its future growth?'. Someone from Norway or from the Black Forest, used to trees as towering pines, might, on a first visit to the National Parks near Sydney, (Kuring-gai Chase to the north; the Royal National Park to the south) be unwilling to dignify the twisted, gnarled, wonderfully shaped vegetation on the sandstone plateau with the name 'tree'. The 'settlers' who encountered the Mallee trees of the South Australian inland used the word 'scrub' to name the expanses of these hauntingly beautiful, low-growing eucalypts. That gave legitimacy to uprooting thousands of square miles of that forest and sow the land to wheat – at least until the

thin topsoil had blown away. The use of the signifier 'tree' is not automatic; it is socially motivated and individually enacted as apt for me, on that occasion.

My problem with naming the pot plant is not about the *sound* that would seem right for this plant, but about the lexical and social 'place' where it would fit. Had it been the former, then, yes, bub or sub, dub or dib, slib even, might all have served equally well as a name; though questions of euphony might have been a consideration, itself not a matter of an arbitrarily made decision. In other words, in sign-making there is a homology between *signified* and *signifier*: both are from the same level. In Social Semiotics *arbitrariness* is replaced by *motivation*, in all instances of sign-making, for any kind of sign (Kress, 1976, 1993, 1996; Hodge and Kress, 1988).

The banal, the everyday and unremarkable is always the best site to anchor theory. My examples here are chosen with that in mind. Colour plate 3 shows two images of sachets of salt and pepper, the kind you used to get (and still do, in some cases) on your tray, travelling in economy class on an airline. These things have a practical use: to make the meal on your tray more palatable, if you like salt or pepper. They are also signs and they interest me as signs – of salt or pepper. On a different airline the salt and pepper sachets are different (Colour plate 4); and on a third and fourth they are different yet again (Colour plates 5 and 6). This variety requires an explanation; and it demonstrates to my satisfaction that the sign-makers have chosen – differently in each case – what is to be taken as criterial about the object to be represented: how to represent 'salt' and 'pepper'. There is a vast range – infinite maybe – of possibilities of representing 'salt-ness' and 'pepper-ness'. Each of the choices provides insight into the sign-maker's interest. In Colour plate 3, the colours on the sachets – a kind of orange red for the iodized salt and dark brownish-grey for the pepper – point to interest and motivation: the colour of iodine and the colour of pepper.

As with the chess pieces, in each case a criterial feature of the thing to be represented is chosen. In Colour plate 3, colour is chosen to distinguish the condiments. For a passenger dealing with lunch or dinner on their tiny tray – with the light not all that good in the middle seat of the central row – the most important thing is easy recognition. Most users might agree that the greyish-brown is an apt choice as a signifier for pepper and would not work well as an apt signifier for salt. And while it might be objected that salt is rarely orangey-red, the colour does work both in distinguishing it from the pepper and in signifying that this salt is 'iodized'. With both in front of me, I am unlikely to go wrong in my selection of salt or pepper, even though I might not manage to read the word 'iodized' on the sachet. A feature of the object to be represented is selected as criterial and becomes an apt signifier in these specific circumstances.

On another airline (Colour plate 4), a different criterion is selected as a signifier for the same object – salt and pepper. There are two words, as labels; the message is 'repeated' in a way; maybe because, as in the other case, words may not be reliable enough under the circumstances. Here colour is not criterial for distinguishing salt and pepper. Instead, there is a visual reference to a culturally specific practice of serving and using salt and pepper in domestic or public environments – in salt and

pepper shakers. We can ask whether colour is still important: there are bound to be colours that would *not* be apt as signifiers for either salt or pepper. If so, it would indicate that colour is significant here too, though implicitly. This too is a motivated sign, even though the signifier chosen is from an entirely different domain to that of colour, namely a reference to social use. That signifier too is apt for the signified.

The two signs show a different 'angle'. In Peirce's schema, the Delta sachets might be regarded as an indexical sign, pointing to an earlier sign, an actual shaker and its use. In Multimodal Social Semiotics this is seen as a matter of *provenance*, a reference both to a cultural practice and to the object 'salt and pepper shaker'. The question posed and answered here is 'Where does this signifier come from?' (Kress and van Leeuwen, 2001). The signs of the sachets with iodized salt belong to the Peircean category of iconic sign – of 'looking like or being like'. It is the sign-maker's decision as to what is to be taken as criterial – with any sign. The different 'angle' indicates different positioning: we are in the realm, however mildly, of ideology.

There may be other criteria. The deep navy blue colour of the salt and pepper sachets in Colour plate 4 looks to me – I am not a frequent user of the airline – like the 'corporate blue' of the airline's livery and logo. In other words, the sachet of salt and pepper may be being used to signify a 'corporate meaning', 'Delta-ness' – a feel-good factor to sprinkle on and digest with your food. *Provenance* – the question 'Where does this come from?' – puts us in the difficult waters of difference of cultural practices: in some cultures you get salt from the shaker with the one hole and in others from the one with many holes; and vice-versa with pepper. That does not change the principle of *motivation*: it points to different social histories, valuations and consequent differences in the use of these condiments in the culinary and gastronomic histories of different cultures.

In Colour plate 5, the sign refers to specific social practices: the uses of salt and pepper in the social histories of cooking – the practice of grinding the 'raw' materials in a marble mortar; a cultural reference leaning on tradition, on a specific aesthetics and evoking notions of authenticity.

The relation of signifier to signified is not an arbitrary one in any of these examples. It is doubtful whether any one of these signs will become generally accepted as signifiers for salt or pepper. The airlines' intentions, if anything, are to keep them distinctive; and maybe to allow themselves to engage in a little mild playfulness with their 'guests'. Nevertheless, the theory ought to be able to tell us under what conditions this might or might not happen. What it does show is that the relation of signifier and signified in the sign has a social and therefore 'political' and ideological component. A 'playful relation' with someone nowadays often called a 'customer' or a 'client' is to make a social and ideological point about that relation and maybe about a wider ideological frame.

In my last of these examples, Colour plate 6, 'ideology' in the sense of the suggestion or projection of a particular 'world' seems to me quite clearly present. Here the colour-scheme works together with the faint 's p i c y' printed across the bottom of one side of the two joined sachets – 'spicyness' as something that adds fun to life.

This is no longer just about salt and pepper, but about a characteristic which might define not just an individual but a community, about a whole attitude to life, about being Austrian and Viennese. Here *discourse* – in the sense of a position in and to life, the shaping of a way of being in the world, of ways of being and knowing – is most clearly evident. Equally with *genre*, as an expression of the social relation between airline and its 'guests' and the 'address' of the reader/viewer.

The crucial point is the unnoticed, near invisible social and ideological effects of the signs of the everyday, the signs of ordinary life, of the unremarkable and banal, in which *discourse* and *genre* and with them *ideology* are potently at work – nearly invisibly – as or more effective than in heightened, clearly visible and therefore resistible instances.

The concept of the *motivated sign* in no way places restrictions on sign-makers; the sign is as open or as restricted as the sign-maker's *interest*, which shapes the sign; an *interest* which is an effect and a realization of the histories in social environments of the sign-maker. The examples show this clearly: one speaks of health (the iodized salt); another of social practices; the third of culinary traditions, of the aesthetics of cooking and of kinds of authenticity; and one speaks of lifestyle, of pleasure and fun. All these are present, differently weighted, differently valued. The social, its histories, knowledge, its forms of social relations, its discourses and genres, are here, manifested in these unremarkable, everyday, banal objects-as-signs.

All the examples show the social embeddedness of signs and sign-making practices: histories of the value and valuation of pepper in the histories of European cooking; of social uses of salt; of their preparation in households; of the recovery of tradition; or of just being 'cool'. At an Italian restaurant near my place of work – one of a successful 'chain' – there are small, shallow, white saucer/plates on the tables, filled with coarse flaky sea-salt. They invite me to imagine myself as an Italian peasant, picking up salt with my fingers, crushing it and sprinkling it on my bread after dunking it in the saucer with olive oil. I am reminded of the one-piece heavy glass salt and pepper containers of my childhood, with two shallow 'bowls' on either side, in the middle of the table for everyone to take their pinch of salt or pepper, or 'dip' their potato or bread. These objects show that signifiers and signs carry, in their make-up, the traces of long histories of practices. The meanings of these practices are present in the signifiers as a potential for meaning and are carried 'forward' in constantly transformed fashion into new signs, remade in the light of the resources that (re-)makers of signs bring with them. In signs, sign-makers mediate their own social history, their present social position, their sense of their social environment in the process of communication; and this becomes tangible in the reshaping of the cultural resources used in representation and communication. The makers of signs 'stamp' present social conditions into the signs they make and make these signs into the bearers of social histories.

Interest and the partiality of representation

The next example shows the processes at the core of sign-making with great clarity. A three-year-old, sitting on his father's lap (mine, as it happened), draws a series of circles, seven to be exact. At the end he says: 'This is a car' (see Figure 4.1, above).

How is, or could this be 'a car'? While drawing, he had said 'Here's a wheel . . . Here's another wheel . . . That's a funny wheel . . . This is a car.' For him the *critical* feature of car was its 'wheel-ness'; it had (many) wheels. Two steps are involved in the making of this sign. At the first step, 'wheels', the *signified*, are represented by circles, as apt *signifiers*. At the second step, the *signified* 'car' is represented by the apt *signifier* of '(arrangement of) seven circles'. To represent wheels by circles rests – on as with the replacement of the chess pieces ('a black button is like a black piece') – on the principle of *analogy*:

Step one:

analogy → 'circles are round; wheels are round; circles are like wheels';

Step two:

analogy → 'a car has many wheels; many wheels are like a car'.

The outcome of the double *analogy* is two *metaphors*: 'circles are wheels', and 'many wheels are a car'. The complex sign 'car' made here, is the product of the making of two signs conjointly, a double process of analogy, resulting in two metaphors: 'circles are (like) wheels' and 'many wheels are (like) a car'; and finally as one metaphor 'this (the complex visual sign) is a car'.

To see how or why wheels could be the *critical* feature for 'car', we have to adopt the point of view, literally, physiologically, psychologically, culturally, semiotically, of the three-year-old. If we imagine him looking at the family car (a 1982 VW Golf, with prominently bulky wheels, especially at the eye-level of a three-year-old) we might conclude that this sign-maker's position in the world, literally, physically, but also psychically, affectively, might well lead him to see 'car' in that way. His interest arises out of his (physical, affective, cultural, social) position in the world at that moment, *vis-à-vis* the object to be represented. His sign reflects his 'position'. Generalizing, we can say that *interest* at the moment of sign-making arises out of the sign-maker's position in the world; it *shapes attention*; that *frames* a part of the world and acts as a *principle for the selection of apt signifiers*.

Clearly, the child's *interest* is partial: there is more to a car than wheels, even for a three-year-old. Theoretically we have a choice: we can treat this as an instance of childish representation and dismiss it; or we can take it as a central feature about representation in all instances. That is the route I have taken: all representation is always partial. What the sign-maker takes as *critical* determines what she or he will represent about that entity. An adult's choices are more shaped by a history of experiences in various social environments; and adults have greater awareness of and access to the resources for representation available in their culture. The *principle* of

sign-making however remains constant. *Partiality of interest* shapes the signified at the moment of the making of the sign. At the very next moment the sign-maker's *interest* is likely to have changed; something else about 'the same' phenomenon or object has now become *critical*. Nevertheless, there is nothing anarchic or arbitrary about *interest* or about *attention* or about the formation of signs as the motivated relation of a signified and an apt signifier.

At the moment of the making of the sign, representation is always partial: yet it is always 'full', 'complete'. It is *partial* in relation to the object or phenomenon represented; it is *full* in relation to the sign-maker's interest at the moment of making the sign. That is the case with this 'car' as much as with the representation of any car in any advertisement. *Interest* produces *attention*. *Attention* frames the world to be represented. *Analogy* translates *interest* and selects what is to be represented as the *signified* into *apt means* of representing it, the *signifier*. The result is a *sign*, formed on the basis of the relation of *analogy*. The outcome of that process is a *metaphor*. All signs are *metaphors*, always newly made, resting on, materializing and displaying the *interest* of the maker of the sign.

Representation – the meaning that I wish to realize, to make material – is not *communication*: the two are quite differently focused. *Representation* focuses on my interest; *communication* focuses on the assumed interest of the recipient of the sign. My sign needs to be shaped for the person or group for whom I have intended it to be a sign. That leads to the demand for transparency in communication.

Consider an example, well-known to most of us. We are in a plane, just before take-off. The cabin staff are going through the safety instructions, and are about to point out the emergency exits. Standing at the front of the plane, facing in the direction of the cockpit, that is, with her back to the passengers, an attendant 'performs', to the spoken announcement: 'two exits at the front, one left one right'. She raises her left arm and gestures in the direction of the left-hand exit; she raises her right arm and gestures in the direction of the right-hand exit. Her gestures are *apt signs* – the raising of arm and gesturing with her hand are *apt signifiers* – *left arm to left exit, right arm to right exit*. Spoken and gestural signs are in agreement. Both aptly represent what is to be represented. As the announcement continues with 'two at the rear, one left, one right', the attendant has turned around and now faces the passengers. On 'one left' she raises her *right* arm and gestures with her *right* hand to the exit which, for the passengers, is on the left-hand side; on 'one to the right' she raises her *left* arm and gestures with her *left* hand to the exit to the *right* of the passengers. She does the same to 'and four exits over the wings, two left, two right' (with an additional little wave of the hands to signify 'flapping' or 'wings'). Now there is a contradiction: her raised arms and the gestures of her hands are at odds with the spoken announcement: they are no longer *representationally* apt: 'one left' is gestured with her *right* arm and hand and 'one right' with her *left* arm and hand. In other words, in this environment the demands of communication, the overriding need, is to adopt the passengers' view-point, which makes her (complex) signs internally contradictory. The interests of the passengers have over-ridden her interests; or,

better, she has factored the interests of her audience into the complex sign that she has made. The signs are *communicationally* apt. The greater demands of the communicational partner override the *representational* needs of the sign-maker for the aptness of realization of her meanings.

This may seem too obviously necessary to be useful or persuasive as an example for the theoretical point here: yet in many situations contradiction is exactly what happens; often it is the normal condition of sign-making. The sign is contradictory, from her perspective as much as from the perspective of (the luckily few) literal-minded passengers. It is also the case that most passengers would not notice the contradiction. Most passengers (like most of us at most times) assume that the world of sign-making is ordered by *our* interests, or at least on this occasion; so no contradiction is noted.

On this occasion it is the passengers who count; and so their interest prevails. Theoretically it means that all sign-making has to be founded on a careful assessment of the social environment and the relations of power in that environment. That must precede the process of communication. For the powerful, the normal situation of sign-making is that others' sign-making is ordered to fit the interests of the powerful. Power skews the semiotic world away from *transparency* into the direction of *opacity*. Much of what passes as 'politeness' (in anglophone cultures) is evidence of the skewing effects of power in communication. The more powerful the maker of the sign, the more she or he can ignore the requirements of transparency – that is, attention to the communicational requirements of others. Those others have to do the semiotic work that makes up for the neglect of the privileged.

All signs are made with these two perspectives and interests: *mine* in relation to my representation and interests; and *yours* in relation to *communication* and to the need for factoring in your interest and the requirements of power. While power introduces opacity into the world of signs, it does not disturb the principles of the motivated sign. A common assumption in debates around communication is that 'good communication' is 'transparent communication', that is, communication where there are no obstacles to an understanding between the person or institution who shapes the message and the individual or group who are its intended audience. The idea of 'aptness' works in that direction: the maker of the sign attempts to find the material signifier which is best fitted to 'realize' the (meaning of the) signified. However, the maker's interest cannot ever be known to the recipient. But if the recipient can safely assume that the *relation of aptness* between form and meaning will hold, then she or he can form a useful hypothesis about the signified and the interest of the maker of the sign on the basis of the 'shape' of the signifier. The recipient may not know about any limitations in the availability of signifier-resources to the maker of the sign. An example is my knowledge of French: anyone reading something written by me in French would be helped by knowing about the limitations of my resources in that language.

A usual situation is that of communication across boundaries demarcating 'cultural groups' – communities of people who by virtue of factors such as age, region,

education, class, gender, profession, lifestyle, have their specific and distinct semiotic resources, differently arranged and valued. That reinforces the point I have just made: namely the need to shape my sign in relation to the person or group for whom I have intended the sign and on the effect which that is likely to have. As societies and as situations of communication become ever more diverse, that is an increasingly significant factor, an area of work which Intercultural Communication has dealt with for quite some time (Scollon and Scollon, 2000).

Social power tends to be expressed relationally, as *position* and *direction*, characterized roughly by the metaphors of 'up', 'down' and 'horizontal' (Brown and Gilman, 1966). Power is constantly contested, with varying potentials of success, for instance through subversive genres such as *allegory*, *joke*, aware of the degrees of superior power exerted to limit such expression (Bakhtin, 1986). Even in instances or periods of great power difference – or maybe particularly then – such challenges exist.

The current fundamental challenges to and shifts in social power in nearly all domains of 'Western' sites have had and are having *semiotic* effects. Equally, there are the potentials of *semiotic* power as means of challenge to social power. Power and its effects were the core of Critical Linguistics (Kress and Hodge, 1979; Fowler *et al.*, 1979; Hodge and Kress, 1988; Hodge and Kress, 1993), parts of which later morphed into the larger and theoretically more diffuse project of Critical Discourse Analysis (Kress, 1984/89; Kress, 1991; Fairclough, 1989). It remains one of the central interests in communication. That includes (Foucault's notion of) power from below (Foucault, 1982) or power exercised/marshalled (seemingly) horizontally. None of this affects the metaphor of *position*; in each instance, those who exert power assume the position of 'up', even if only for a moment of refusal and 'resistance' or of some other countervailing action. Refusal to acknowledge the demands of power is power; just as refusal to act is to exercise power.

We are all familiar with examples in language. In their landmark article 'The pronouns of power and solidarity', Brown and Gilman (1966) drew attention to a social and semiotic change in seventeenth-century England, when the second person plural pronoun *you* (the *vous* of French, the *Sie* of German) changed from being the pronoun of power and became the pronoun of address for everyone. Such social and semiotic change produces a far-reaching unsettling of social arrangements; it disturbs the expression of power and of power itself but it does not – and did not in that case – abolish it. New forms for expressing power needed to be and were found. In English I can address my boss as *you* and by his first name (students in higher education in the UK tend to address their teachers by their first names) but I do not address my boss with an imperative – e.g. 'Shut that window, Bill!'; nor, usually, would a student their teacher.

What is the case for *speech* is the case for all modes. *Speech* provides means for the direct address of a social other in interaction, but so do *gesture*, *gaze*, *proximity* and *movement*. It is not difficult to test out how, with each of these modes, I can indicate *deference* to power or my *amelioration* of power in complex signs. Averting my gaze (I am talking here about 'my' social group – these signifiers and signs are highly

sensitive to social difference) has a different effect to fixing someone with my gaze and holding it. Where modes are involved which do not afford the 'address' of a social other but which nevertheless inevitably represent social relations, signs both of deference and of amelioration can be produced. In a photograph the angle of power (high to low; low to high) can be varied in infinitely nuanced gradations. In watching the evening news it is possible to make reasonable inferences about the state of the 'British' economy based on the position from which the Bank of England building is shown. 'Distance' can be manipulated in a 'shot' in film or in a photo; as it can in the physical arrangements of furniture in a place of work; or in seating arrangements at a dinner table. In all these, power relations can be represented to indicate *deference* or *amelioration*. Soft focus or its opposite in photographic image; choice of words from a formal or a familiar register; the direct expression of a request or indirection; the choice of medium – not *text-message* for those to whom I defer but a more formal medium, whatever that may be at that moment; not sitting in a 'confronting position' in a meeting: all are means of expressing power or deference to power.

(Complex) signs and ensembles of signs are read conjointly so that the contradictions which inevitably exist in such ensembles provide readers with the means of making sense of any one sign and of the sign-complex overall. If many signs in the environment point to the power of a participant, then her or his use of signs of the diminution of power – in 'politeness' for instance – can be read as such and not as a sign of lesser power. This complex relation of signs (and ensembles of signs of often quite different kind) is encapsulated in the notion of the *logonomic system* (Hodge and Kress, 1988), itself a complex of signs that gives readers means of reading, 'navigating', of 'placing' the interrelations and valuations of signs in sign complexes: means for reading *contradiction*, *tension*, *opposition* and apparent or real *incoherence* as well as *irony*, *humour*, degrees and kinds of *realism*, *fictionality* and *facticity*, and so on. In that context, *contradiction* of one sign with others in a sign-complex is in no way dysfunctional but supplies essential information for an accurate reading of the social/communicative environment, which includes the maker of the sign.

Makers of signs, no matter their age, live in a world shaped by the histories of the work of their societies; the results of that work are available to them as the resources of their culture. Inevitably, what has been and what is 'around' and available, has shaped and does shape the interest and the attention of the maker of the sign. Two-year-olds can pick up pens and make marks on paper because pen and paper are there. They can (still – these materials may be passing) shape objects with playdough; make shapes with scissors and paper. Culturally provided material resources have their effect in shaping and directing, in the 'channelling' of interest.

A request by a primary school teacher to *write a story* about a visit to a museum suggests specific possibilities to the child writer, different to those of a request to *draw* an image of that same visit. The world projected in the written *recount* of the visit and the world projected in the visual account (see Figure 4.3) are likely to be profoundly different. Here is the written 'story':

When I got to the museum it looked bigger than I thought. When I went in I took off my coat and went into the men's toilet and after I ran upstairs I went into the lift. Then I went to see the mummies and all those stuff. Then we went to our cloakroom so we can get our coat and then we went to Waterloo station on a tube and a train to Clapham Junction and walked back to school and went home very happy and I told my mum, sister and my brother. The end.

The written *recount* and the *drawing* are both recollections of the visit, set down on the following day. The 'story' of the visit conforms both to the genre of *recount* and to the (semiotic) logic of *speech* – a mode familiar and congenial to a six-year-old – here present in its *transcription* into 'writing': a chronologically arranged sequence of actions and events. The depiction of the day in the *drawing* is entirely different. It too conforms to the semiotic logic of its mode: the simultaneous presence of entities, shown in spatial relations within a framed space. The *logic of speech* seems to suggest the question: 'What were the *salient* events and *actions* and in *what order* did they happen?'. The *logic of image* seems to suggest a different question: 'What were the *salient entities* in the visual recollection of the day and in *what relation* to each other do they stand?.'

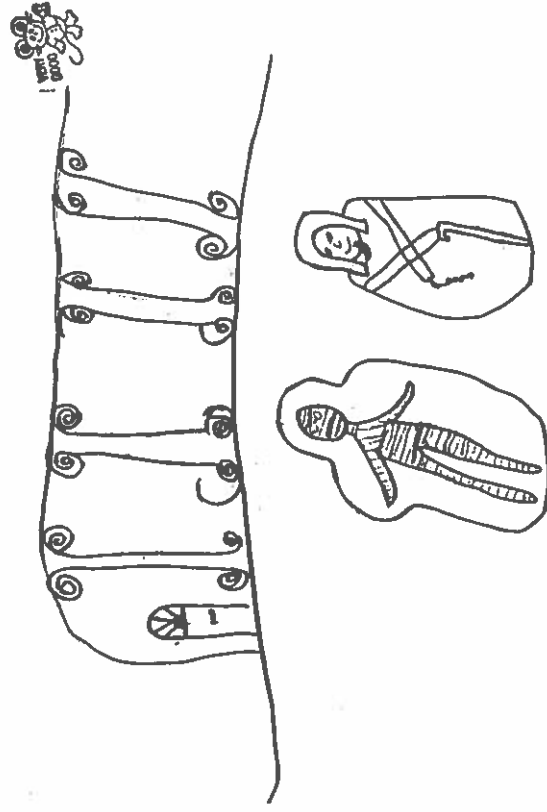


Figure 4.3 Child's drawing of the visit to the British Museum (with thanks to Eve Bearne)

The question about the image seems to be answered as 'I was really impressed by the façade of the museum, with those huge columns; and by the mummies which I saw in the museum. The two mummies were a bit different from each other, but they were equally interesting, and I drew them in front of the museum in which I saw them.'

If this is, in its brief form, a reasonable account, we might infer that the two modes of *image* and *speech* (here as written transcription) organize representation differently, that each poses specific kinds of 'questions'. Putting it more strongly, we might say that the request to make a representation of the day's experience in two modes leads to sign-complexes which order the recollection of the day in line with the *affordances* (and the *logics*) of the two modes. We might go a step further yet and ask whether a habituation to representing in one mode or the other could come to organize and shape our engagement with the world prior even to any request from outside or need to make a representation.

Interest is decisive because it forms the basis of the choices of what I take as potential, the availability of modes, their materiality and their affordances. It offers potentials and imposes limitations of what can be or what is more likely to become criterial. When I *look*, different possibilities offer themselves to me (through vision) than when I *hear* (through the auditory apparatus). The modes and the kinds of uses made of mode in a society bring with them certain orientations, a certain 'take' on the world. By and large, that 'take' becomes 'invisible' (inaudible, intangible) – in the sense of explicit awareness – to those who do 'take' it. Cultural and social habituation to modes, genres and practices shapes how we represent. In time that habituation to *representation* can begin to shape our expectations about how we will encounter and engage with the world which we then represent. Within the broad range of modal choices available in a society, there is then the individual's decision to make choices to use these modes rather than those in this environment for these reasons.

Mimesis, signs and embodied experience

In the reception of a sign the *materiality* of modes interacts with the physiology of bodies. When I see a gesture I understand it in large part in an action of 'silent' or actual *mimesis* (Wulf, 2005): I come to understand its meaning – say the extent of the sweep of a hand-movement or its pace – mimetically both by an inner, invisible, 'parallel' performance for myself or through an outer, visible performance, in which I experience in my body what the meaning of that gesture might be. I have caught myself attempting to imitate gestures which I had noticed in order to 'feel' their meaning. There are, as well, the meanings suggested by signs in the accompanying environment. Signs made in gesture are culturally shaped as are all signs in any mode, so there is the problem of misunderstanding.

Many signs we encounter are in three-dimensional form; or they are in time; are signs we make, for instance, via the senses of *smell* or *touch*. Here too the concept of *mimesis* is crucial. We engage with the objects represented in the images in Colour plates 7 and 8 – when we encounter them in a supermarket or at home – not only

through the modes of image, writing, colour, but also in actual or imagined 'inner' mimesis through touch and feel, scent and smell, in action – imagined or real. The feel of the plastic container; its texture; the shape of the 'bottle'; the action of pouring or other use suggested by the shape; its imagined and actual fit into the hand; the scent when the lid is undone; all engage more of our body in their materiality than sparser notions of 'representation' might usually suggest.

In the engagement with any sign, the materiality of modes – where *sign* and *mode* are understood broadly – interacts with the physiology of bodies. All signs, whether those that I make in my actions, or remake in my inner transformative and/or transductive (re)actions, are always embodied, for maker and remaker alike. In this way the meaning potentials of the mode in which a sign is made become embodied. No sign remains, as it were, simply or merely a 'mental', 'conceptual', a 'cognitive' resource. At this point the processes named as *affect* and *cognition* coincide absolutely as one bodily effect. In this way too, *identity* is embodied and becomes more than a merely mental phenomenon, an 'attitude', maybe, that I display or perform.

At one level this is not much more than the common observation that children mimic many of the physical attributes, practices, habits – facial expressions, gestures, modes of walking, other forms of bodily hexis – of their parents or of others close to them. At another level it is a realization which forces us to reconsider, profoundly, the separation of categories such as mind and body, of cognition and affect.

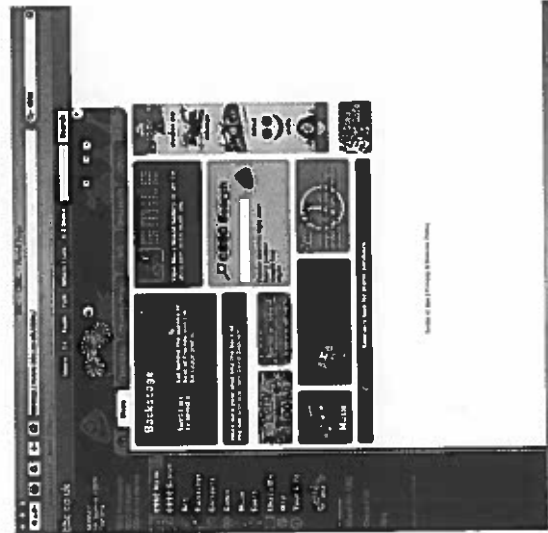
From an analytic perspective of a social-semiotic theory of sign- and meaning-making, the following might be said. The sign which the sign-maker has made gives us an insight into their 'stance' in the world, with respect to a specific part of the world, that part framed by the interest of the sign-maker. As a general principle we can take all signs to be precisely that: an indication of the interest of the sign-maker in their relation to the specific bit of the world that is at issue; an indication of their experience of and interest in the world. Signs are shaped by that and give us a sense of the criteria, the principles, the interest, which led to that representation. In doing that they give us an insight into the subjectivity of the sign-maker.

Taking this stance forces me to add another element to my example of the chess pieces. There I attempted to show the motivated relation between form and meaning. But in my discussion there I did not consider the *materiality* of the form of the sign. To put it simply: my characterization of playing chess was – as it were – disembodied, an abstracted mentalistic account. Chess can be (and at times is) played like that, as 'mental chess'; it is then regarded as a particularly difficult achievement. In most instances of playing, the pieces are there in fully three-dimensional extension and for a very good reason: they have a material reality; they have an aesthetic effect; they make playing chess more than an intellectual activity. At that level it comes to matter – especially if it happens on too many occasions – that the button-pawn lies flat on the board, is awkward to pick up, and takes away even if slightly from my pleasure in playing the game. My pleasure lessens. Something is different, missing. The material chess piece – carved or cast – has a tangibility and an aesthetic which has an effect on me materially, as a body in the world, with experiences, embodied, a materiality that

adds to my pleasure of playing the game. I might much prefer to play with pieces with a certain dimensionality, weight, texture, aesthetic and which for reason of those qualities give me pleasure. That sensory, affective and aesthetic dimension is too often ignored and treated as ancillary. In reality, it is indissolubly part of semiosis.



Colour plate 1 The operating theatre (Pages 32, 33)



Colour plate 2
BBC homepage
2005 (Pages 37, 38,
175)

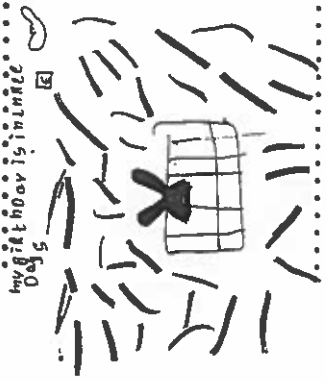
5 Mode

Materiality and affordance: the social making of mode

Mode is a socially shaped and culturally given semiotic resource for making meaning. *Image, writing, layout, music, gesture, speech, moving image, soundtrack and 3D objects* are examples of modes used in representation and communication. Phenomena and objects which are the product of social work have meaning in their cultural environments: furniture, clothing, food, 'have' meaning, due to their social making, the purposes of their making and the regularity of their use in social life. As their primary function is not that of representation and communication, there is a question whether they should be considered as modes – even though we know that they can be used to make meaning and to communicate.

The introduction of the concepts of *mode* and *multimodality* produces a challenge to hitherto settled notions of language. After all, if all modes are used to make meaning, it poses the question whether some of these meanings are merely a kind of duplication of meanings already made in, say, speech or writing – maybe for relatively marginal reasons such as 'illustration' or for aesthetic reasons such as 'ornamentation' – or whether they are 'full' meanings, always quite distinct from other modes. If the latter is the case, then 'language' has to be seen in a new light: no longer as central and dominant, fully capable of expressing all meanings, but as one means among others for making meaning, each of them specific. That amounts to a profound reorientation. It is the route taken in social semiotic approaches to multimodal representation.

Different modes offer different potentials for making meaning. These differing potentials have a fundamental effect on the choice(s) of mode in specific instances of communication. *Writing* (in English, as in many other languages) has words, clauses, sentences, organized through *grammar* and *syntax*. It has graphic resources such as font, size, bolding, spacing, frames, colour. To *frame* its units, it has syntactic, textual and social-semiotic resources (e.g. *sentence, paragraph, textual block, genre*). In *writing*, the frames use graphic resources such as *punctuation marks, visual means* such as space between words or around paragraphs and increasingly, 'blocks' of writing, often in different colours, on surfaces such as *pages or screens* or others. These resources have specific forms in different cultures. Crucially, cultures may use different script systems. That makes it problematic to speak of *writing* as such; instead we need to say, *writing* in this culture or that, with an alphabetic or a character-based script. What applies in this respect to the mode of *writing* applies to all modes.



Colour plate 12 'My Birthday': affect
(Page 109)



Colour plate 11 Hedgehog, Em
(Page 109)



Colour plate 13 Lego car (Page 120)



Colour plate 15 Inside the room: 'Armenian wedding'
(Page 149)



Colour plate 14 Outside the room: 'Armenian wedding'
(Page 149)

The mode of speech shares aspects of lexis, syntax and grammar with writing. The material 'stuff' of speech however, sound, is entirely different from the graphic stuff of writing. Sound is received via the physiology of hearing; the graphic stuff of writing is received via the physiology of sight. Sound offers resources such as (variation in) energy – loudness or softness – which can be used to produce alternations of stressed and unstressed elements, of rhythm and accent, which produce the rhythmic organization of speech and the accentuation of words. Pitch and pitch variation (variation of the frequency of oscillation of the 'vocal' chords) produce tone in tone-languages (such as Mandarin or Igbo) and intonation in languages such as English. Speech has vowel quality, length and silence. Speech uses sound for the framing of its units. In English for instance, the contours of intonation are used to make and frame intonation units. These material entities are used to mark out given and new 'information' in semiotic entities, information units. (Halliday, 1967). If I say 'It was last Saturday he came' with high intonation on 'last' and falling away (i.e. contrasting with 'not Saturday two weeks ago'), the informational meaning is different to 'It was last Saturday he came' (i.e. contrasting with 'not last Sunday').

These units, held together in larger intonational frames, produce chunkings of meaning similar in some ways to the (written) paragraph and yet also quite distinct in their potentials for meaning. Sound happens in time and that allows the voice to 'sustain' a sound, to 'stretch' it as a resource for meaning – as in the lengthening of vowels and the reduplication of certain consonants: 'Aaaalbert, come here', 'yummmy', 'psssst!'. Writing uses graphic means – bolding, size, spacing – to achieve semiotic effects which are only in some respects similar to those produced by sound in speech. Bolding and 'loudness' differ materially; yet in some cultures they are integrated into and 'belong' to one more general semiotic category of intensity. Bolding in writing and 'loudness' in speech are both signifiers of intensity and are one means of realizing meanings (signifieds) of 'emphasis'.

In a social-semiotic approach to mode, equal emphasis is placed on the affordances of the material 'stuff' of the mode (sound, movement, light and tracings on surfaces, etc.) and on the work done in social life with that material over often very long periods. The distinct material of sound (in the case of speech) and of graphic stuff (in the case of writing) is constantly shaped and reshaped in everyday social lives, in the most banal as in the most extraordinary circumstances. Banality and exceptionality alike ensure that all of social life is captured in that shaping.

Social – and therefore semiotic – work with the 'same' material, sound, can lead to very different modes: to speech of course, to soundtrack as in film; to music; to drum languages; to so-called whistle languages. These rest on different use of the affordances of the same material features: variations in energy (loudness/softness), differences in pitch (high pitch/low pitch, rising and falling voice), changes in duration of elements (long vowels/short vowels), pauses and silence.

The social work performed ceaselessly by members of social groups with the affordances of the material, together produce semiotic resources. That is, modes are the product jointly of the potentials inherent in the material and of a culture's

selection from the bundle of aspects of these potentials and the shaping over time by (members of) a society of the features selected. Hence the resources of modes, say image or speech, are both similar to and different from each other within one society: similar, in that they are shaped in the one society and by its characteristics and the needs and demands of its members, yet different in that the materiality of different modes offers different resources and potentials for social shaping. That difference in modal affordance also leads to differential use and hence to a further cause for distinctness. Modes differ in what they offer from culture to culture for exactly these reasons: the different requirements of different societies and their members and the consequent different shaping. As a semiotic resource, image in one culture is therefore not identical to image in another. Even across closely related cultures and 'languages' (such as English, French, German) differences in the cultural use of, say, vocal intensity (appearing as accent in words and as rhythm in extended speech) or of pitch variation (appearing as intonation); differences of pace, of vocalic quality, and so on, lead to characteristic variation in meanings made, in signs.

Yet there are commonalities. Speech happens in time. In speech one sound, one word, one clause follows another, so that sequence in time is one fundamental organizing principle and means for making meaning in this mode. This is shared across all cultures. By contrast with speech, image is 'displayed' on a surface in (a usually) framed space. All its elements are simultaneously present; the arrangement of elements in that space in relation to each other is one fundamentally organizing principle and means for making meanings. So while time and the sequence of elements in time supply the underlying '(semiotic) logic' of speech, in image by contrast, space and the relation of the simultaneously present elements in that (usually framed) space supply its underlying '(semiotic) logic'. The 'logics' of space and time are profoundly different and offer distinct potentials for a culture to shape meanings.

Some modes, gesture or moving image for instance, combine the logics of time and of space. In gesture there is sequence in time through movement of arms and hands, of the head, of facial expression, as well as their presence against the stable spatial frame (the background) of the upper part of the torso. In (older versions of) moving image the logic of sequence in time is provided by the succession of frames of images, each of which is itself organized by the logic of space and simultaneity.

In alphabetically written languages, writing is somewhat of a border category in this respect: it is spatially displayed, yet it 'leans on' speech in its logic of sequence in time, which is 'mimicked' in writing by (spatial) sequence of elements on the line (in script systems which use the line) on which writing is displayed. This spatial display of writing and of its elements on the line, its 'linearity', gives rise to the impression that it works like an image. However, the elements of an image can (usually) be 'read' in an order shaped by the interest of the 'viewer', while the reading of writing is governed by the ordering of syntax and the directionality – left to right or right to left – of the line. Writing is not, dominantly and finally, organized by the logic of space; as readers we are bound both by the orderings of syntax and the directionality of the line. Culturally, both speech and writing share – even though in significantly different

ways – the organizing features of syntax and the resource of lexis. Superimposed on that are the distinctly different material features of sound and graphic ‘stuff’, also socially shaped.

Looked at in this way, there are significant differences between *speech* and *writing*, at times maybe more significant than the similarities. This makes it surprising that *speech* and *writing* have been and still are subsumed under the one label, ‘language’. From a social-semiotic perspective, the use of the one label obscures their distinctness as modes with related yet importantly distinct affordances.

The resources of the mode of *image* differ from those of either *speech* or *writing*. *Image* does not ‘have’ words, nor sounds organized as phonology, nor the syntax and grammar of *speech* or *writing*, nor any of their entities/units. There is no point searching for syllables, morphemes, words, sentences, clauses or any other language-based category in *image*. While *speech* is based on the logic of time, (still) *image* is based on the logic of space. It uses the affordances of the surface of a (framed) space: whether page or canvas, a piece of wall or the back or front of a T-shirt. In *image*, meaning is made by the positioning of elements in that space; but also by size, colour, line and shape. *Image* does not ‘have’ words; it uses ‘depictions’. Words can be ‘spoken’ or ‘written’, images are ‘displayed’. *Image* uses ‘depictions’, icons of various kinds – circles, squares, triangles for instance. Meaning relations are established by the spatial arrangement of entities in a framed space and the kinds of relation between the depicted entities.

Given the distinct affordances of different modes they can be used to do specific semiotic work. The uses of mode constantly reshape its affordances along the lines of the social requirements of those who make meanings; that ensures that mode is constantly changed in the direction of social practices and requirements. Modal change tracks social change. Whatever is not a social need does not get articulated nor elaborated in the entities of a mode. As a consequence, the potentials inherent in *materiality* are never fully used to become affordances of a mode in a particular culture; nor are all the affordances which are available used for similar purposes across different cultures. My mention above of *pitch* may serve as the example. In tone-languages *pitch* is used – among other things – for lexical purposes: difference in *pitch* with the same syllabic (or multi-syllabic) form produces different words. In English, *pitch*-movement is used for grammatical purposes: for forming questions or statements. *Pitch* is used for lexical effect in English too, but to a much smaller extent: try saying ‘Yes’ to mean ‘Are you really sure?’ or ‘Maybe’ or a whole range of other meanings.

Societies and their cultures select ‘materials’ – sound, clay, movement (of parts) of the body, surfaces, wood, stone – which seem useful or necessary for meaning-work in that culture to be done. Selections from the potentials for making meaning which these materials offer, are constantly made in the social shaping of modes. In communities of humans who are speech-impaired, the affordances of the body – the positioning and the movement of limbs, of facial expression – are developed into fully articulated modes, so-called sign-languages. In communities where speech is

available, only a narrow selection of these affordances is used, in *gesture*. Different societies have selected and continue to select differently, shaping different cultural/semiotic resources of mode.

The focus on materiality marks two decisive moves: one is the move away from abstraction: such as ‘language’, ‘the linguistic system’, ‘grammar’ and a move towards the specificity of a mode and its potentials as developed in social uses. The other is that it makes it possible to link the means for representation with the bodyliness of humans: not only in the physiology of sound and hearing, of sight and seeing, of touch and feeling, of taste and tasting, but also in the fact that humans make meaning through all these means and the fact that all these are linked and make meaning together. Beyond that, the focus on materiality offers the possibility of seeing meaning as embodied – as in our bodies: a means of getting beyond separations of those other abstractions, mind and body, of affect and cognition.

The ‘reach’ of modes

Humans engage with the world through these socially made and culturally specific resources and they do so in ways that arise out of their interests. This gives rise to the well-enough understood problems of (spoken or written) translation: certain cultural domains may be well supplied with syntactic and lexical resources in one culture but poorly supplied in another, or else a domain may be entirely missing. Any one culture only ever provides a *partial* naming or ‘depiction’ compared to the world that might be named or depicted. The semiotic ‘reach’ of modes – what is ‘covered’ by the modes of *image* or *speech* or *writing* or *gesture* – is always specific and partial in all cultures, though differently specific and partial. This partiality of naming or depiction, of labelling, is a feature of all modes and all cultures: there are always gaps. Areas in the centre of social attention are well supplied with semiotic resources; others less so, or not at all.

Societies have modal preferences: *this* mode is used for these purposes, that other mode for those other purposes. Over long periods, ‘Western’ societies have preferred *writing* to *image* for most areas of formal public communication. Hence there is a differential ‘density’ of semiotic entities, of naming and of forms of relations even within one society. If a mode is preferred for a specific social domain it will become more specialized in that respect. Not all cultural domains either can be or need to be described and elaborated equally in each mode. The material affordances of modes play into this: the ‘sweep’ of a gesture is infinitely variable in its expressive effect; *gesture* affords infinitely gradable signifiers. *Gestures* are impermanent – once made, no visible trace remains of them. *Gesture* may therefore be a mode with particular uses in certain social domains, as in the community of amateur fishermen.

This means that the ‘reach’ of modes varies from culture to culture. What may be done by *speech* in one culture may be handled by *gesture* in another; what may be well done in *image* in one culture may be better done in 3D forms in another, and so on. We cannot assume that translation from one mode to that (same) mode across cultures

will work. In other words, an implicit assumption, namely that 'languages' (and now modes) deal broadly with the same cultural domains – even if less well in one culture and better in another – is likely to be unfounded. It may be that what is 'handled' by the mode of speech in this language may be handled by the mode of gesture in that; what may be handled by writing in this language may be handled by image in that other society. That difference is likely to exist in the use of modes even among cultural groups in one society. In other words, the assumption that what is represented in speech in Culture A will also be represented by speech in Culture B (of course with different lexis, syntax and genres) may be quite unfounded.

What is a mode?

The former certainties about language had acted as a barrier to posing a raft of questions, such as 'What other means for making meaning are there?' and 'What are they like; what can they be used for, what can they do?'. Turned around, that certainty could have led to unsettling questions: 'What, actually, is *language* like?'. 'Affordance' – the question of potentials and limitations of a mode – applies to all modes, and 'language' is no exception (Gibson, 1986). The idea of limitations in relation to language, however, is new. But that question is now firmly on the agenda in a multimodal approach to communication. 'Language', which had been seen as a full means of expression; as the foundation of rationality; sufficient for all that could be spoken and written, thought, felt and dreamt (Eco, 1979), is now seen as a partial means of doing these.

Considered from the perspective of multimodality, profound questions around language pose themselves where there were none before. The question of 'reach' is one of these; it has three interconnected aspects. The first is: 'What is the social and cultural domain that it covers or that it does not cover?'. The second is: 'What can this mode – *image, speech, gesture, writing* – do in the cultural domain that it "covers" and what can it not do?'. The third is: 'What semiotic features are in the mode and which are not, and why?'. These are often lumped together in the question: 'What are the potentials and what are the limitations of this mode?'. These questions apply to all modes.

Just to give a flavour of what is entailed: when a *gesture* has been made and it has been interpreted, its meaning for the interpreter is 'there' but no material trace remains. So some offensive gesture can be made, have its effect and yet be unavailable for examination. Positively, in the Science classroom a series of gestures may produce a convincing rhetorical effect yet be unavailable for interrogation after. Consider the example below, including Figure 5.1. First, a broad transcription of the teacher's talk and an equally broad indication of the teacher's actions simultaneous with the talk.

The teacher's talk (where // marks off intonation-information units):

'We can think about it // as a circle of blood like this // going round // and at various points // say // the lungs are here // the small intestines here // and the cells

are here // and the kidneys up here // okay // so it's going all the way around // and what it needs // is something to start pumping it again // to give it a bit more motion // to go around // okay //.'

The teacher's actions:

Points at head; traces finger around circle; returns hand to heart; draws on arrows; places opened hand at left of diagram; places opened hand at bottom left of diagram; places opened hand at bottom right of diagram; places opened hand at top right of diagram; draws arrows on circle; points at heart; bends elbow; arms at side, makes bellows action; makes bellows action three times; puts lid on pen.

In the final of four lessons on blood circulation, the teacher had drawn the single large circle (top, Figure 5.1) on the board before the students had come into the classroom. When the class has settled, the teacher begins his account of blood circulation. He points out that the single circle is an oversimplification, that there is in fact another circle, which he draws, to make a double circle, with the heart indicated at the juncture of the two circles. He goes on to say 'We can think about it as a circle of blood like this, going round, and at various points say, the lungs are here, the small intestine here, the cells are here, the kidneys up here, okay so it's going all the way around and what it needs is something to start pumping it again to give it a bit more motion to go around, okay?' As he says this he places his flat opened hand on the left of the diagram where the first arrow is, just to the left of the juncture, then below that, and so up to the juncture and then around the small loop. The point he is making is that the blood is pumped around to *all* the organs, that it circulates from organ

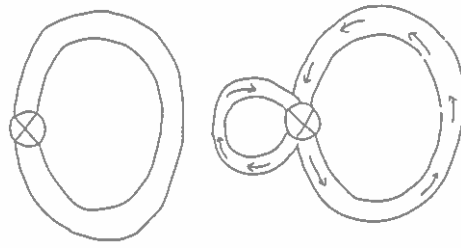


Figure 5.1
Blood circulation

The diagram, together with the overlay of the teacher's gestures, which indicate specific points on the diagram, 'show' plausibly what is going on – the movement of his hand indicating the movement of the blood from organ to organ. The position of the organs is indicated (and a little later repeated and marked with a pen), as is the movement of the blood. This mapping might serve as a topological indication of where the organs are – though as with any topology it would be best not to imagine that the kidneys are roughly at the same height in the chest cavity as the lungs, not to mention the location of the small intestine. Nevertheless, the sequence of gestures has achieved what the teacher wanted to achieve: the tangibly, mimetically witnessed movement of the blood from organ to organ. The fact that in that process the position of the organs was not accurately represented was not for him the issue at that *moment*, nor the fact that the 'cells' are not an organ in the sense of the 'lungs'; nor that they have no specific location in the body, as both *gesture* and *speech* had suggested – 'the cells are here'. The ephemeral character of *gesture* is highly useful: entirely plausible for this moment and for this purpose; physiologically felt by the onlookers, mimetically experienced in their bodies, and then gone, with no real possibility for challenge, with no commitment made beyond this 'now'. 'Sir, but you gestured . . .' does not have the same ontological weight as 'Sir, but you said . . .'

The moment we ask the questions about 'reach', the wide diversity of phenomena assembled under the term 'language' becomes apparent. We can express that as a series of questions: 'What (kinds of) features and entities make up *gesture* or *image*, *writing* or *speech*?' and 'What principles of coherence might unify these features?'. With *speech* we can ask: 'What does pitch variation have in common with lexis?', 'What connects levels of energy – loudness and softness – with syntax? Or tonal variation with morphology?', 'What do rhythm and pace share with vocalic and consonantal features?'. These are entirely disparate kinds of phenomena, clamped together under the label *speech*. *Writing* has a no less disparate set of features and we can ask similarly: 'What does font have in common with lexis, or orthography with syntax?'. Joining all these features under one label, of *speech* or of *writing*, shows one problem. But collapsing *speech* and *writing* with their entirely different materiality into one category, thereby joining and blurring over the distinct logics of time and space, of sequence and simultaneity, exposes the implausibility of a *mode* called 'language'. It is difficult to see what principles of coherence might serve to unify all these features. So I take *speech* and *writing* to be distinct modes.

In some approaches, *gesture* is taken to be part of a larger complex of meaning resources, together with *speech* (or as part of 'language') (McNeill, 1988). Here too the issue of the entirely different materiality rules that out as a possibility in the approach here. The affordances of the material stuff of movements (largely of) hands through other parts of the body may be involved – the shrug of the shoulder, the poking out of the tongue – is entirely different.

That is one step towards answering the question: 'What is a mode?'. After all, treating *speech* and *writing* as modes is to accept that modes consist of bundles of (often deeply diverse) features. Questions which might follow are: 'What features are

inside and which are *outside* a mode and why?', 'Why is facial expression not part of *speech*?'. It seems that everything that happens 'inside' the barrier of lips and nose can be part of *speech*; and what makes use of the physical material of *sound* is part of *speech*. The sarcastic curl of the lips is not. The first criterion is indecisive on the matter, the second makes it clear: a curl of the lip is not *sound*.

These questions are only in part of a semiotic kind; they are more about social practices and histories; about what has been essential, important, salient in a society and in its valuations. This does not, however, answer the question about potentials and limitations. To do that we would need to undertake a full inventory of each mode from that perspective, with an understanding of the potentials of all other modes in that environment. Above I attempted a small sketch of some features assembled 'in' the modes of *speech* and *writing*. There are some quite simple means of starting that task: take my example of saying 'Yes' to mean 'Are you really sure?'. It shows the potential of intonation in *speech*. How could this same meaning be realized in *writing*? In *gesture* it might be the hand with the palm of the hand half turned up; in *facial expression* it might be the puzzled expression or the raised eyebrow with the corners of the mouth quizzically turned up. Such questions would begin to give an answer both about potentials of these modes – of *speech*, *gesture*, *writing*, *facial expression* – and of their respective limitations.

Two further means of answering the question 'What is a mode?' emphasize the social in Social Semiotics on the one hand and the formal requirements of a social-semiotic theory on the other. To put it briefly: socially, what counts as mode is a matter for a community and its social-representational needs. What a community decides to regard and use as mode is mode. If the community of designers have a need to develop the potentials of *font* or of *colour* into full means for representation, then *font* and *colour* will be mode in that community. Of course their decision to do this will not be confined to that community alone: anyone who comes into contact with their work will become affected by that decision. In semiosis, as in culture more widely, 'no man – or woman – is an island'.

Formally, what counts as mode is a matter of what a social-semiotic theory of mode requires a mode to be and to do. In this I adopt the semiotic approach of Michael Halliday, namely that a full theory of communication will need to represent meanings about actions, states, events in the world – the *ideational function*; to represent meanings about the social relations of those engaged in communication – the *interpersonal function*; and have the capacity to form texts, that is, complex semiotic entities which can project a complete (social) world, which can function as complete message-entities which cohere internally and with their environment – the *textual function*.

Unsurprisingly then, there is no straightforward answer to questions such as: 'Is *font* a mode; is *layout* a mode; is *colour* a mode?'. This flies in the face of traditional conceptions: there, what a 'language' is, was known, fixed, given.

To the question 'Is *font* a mode?' there is, on the one hand, a socially oriented answer and a formally oriented one on the other. The former seeks to establish whether there

is a group of people who use the resources of *font* with relative regularity, consistency and with shared assumptions about its meaning-potentials. The second answer is concerned to establish whether *font* can and does fulfil the three theoretical/functional requirements of a theory of communication. If both are satisfied, then *font* is a mode for that group. Such an approach is unlike present and still active understandings around language for instance. This new approach seems improper, nearly, to those of us who had been socialized in a period when an authority decided such issues, based on power as convention and where deviations were (and still are) treated as highly problematic. For a graphic designer the meaning potentials of 'font' – its affordances – are such that it can become mode. Most of us are aware of the meaningfulness of font in our everyday representational activities. I am typing this text using 'Arial', preferring it to 'Times New Roman'. Newspapers tend to stay with specific fonts, whether for their mastheads or for particular sections of the paper, a clear indication of the meaning that adheres to font.

Take colour as another instance (Kress and van Leeuwen, 2002). Most of 'us' (where the 'us' always refers to a socially and culturally specific group) have quite a strong sense of the meanings of colour; which is not to say that we could easily articulate what such meanings are. The meaning of 'the little black dress' is both that it is little – with meanings about gender and the erotic – and that it is black – with meanings about the erotic and its links with power. Cultures where the phenomenon of 'power-dressing' exists, have their colour schemes, whether for men's suits, shirts and ties, or for women's skirts, shirts and shoes. In other words, meaning can be made through the affordances of *font* as it can through colour. These meanings are socially made, socially agreed and consequently socially and culturally specific.

With the socially oriented approach, shared understandings and practices are in focus. With the *theoretically* oriented question 'What is a mode?' the focus is on the communicational task we expect to be able to do with the semiotic resource: neither font nor colour can be a mode if they do not meet the theoretical requirements stated. An approach via such general functions allows us to test 'candidates' for mode status; we can ask whether and how any semiotic resource meets these criteria in instances of use. With that in mind I ask: 'Is layout a mode?'

Is layout a mode?

Consider the figure first shown in Chapter 3, which is shown again here as Figure 5.2a. It is from a textbook for 13–14 year olds, published in 2002. My three questions are: 'Can layout form message-entities which are internally coherent and which cohere with their environment?' (the textual function); 'Can layout represent meanings about the social relations of those engaged in communication?' (the interpersonal function); and 'Can layout represent meanings about the world of states, actions and events?' (the ideational function).

The question 'Can there be versions of this "semiotic entity" (the "page", the "double-page spread") which are *incoherent* internally and externally?' deals with a

central requirement of the *textual function, coherence*. This 'semiotic entity' appears in a school; for a class in the school-subject Science, in a science lesson; and in a school year for which it was designed; it has a place in a curricular sequence, and so on. Clearly, the text coheres with its environment. Conversely, we can imagine any number of environments in and with which it would be incoherent. As far as internal coherence is concerned, a simple test is to ask: 'Will changes in the "arrangement" of the elements which make up this "semiotic entity", produce a different text?'. 'Will such changes produce incoherence?' or 'Will such changes make no difference at all?'. If, no matter what change we make, the text remains coherent then there is nothing to say as far as the textual function is concerned: it does not apply.

In relation to ideational and interpersonal meanings, the formal technique of *commutation*, borrowed from structuralist linguistics, can be used to test for the effect of changes in arrangement. The technique allows me to ask 'What happens if I alter the arrangement of the elements in the text I am concerned with, by substituting this element for that?'. Take the difference between *The sun rose and the mists dissolved* and *The mists dissolved and the sun rose*. The two clauses 'the sun rose' and 'the mists dissolved' remain the same; their order has been changed by commutation of one with the other. As a consequence, the meaning of the two sentences differs.

To apply this test we need to know what the elements of the larger unit are. In my example just above, the elements are the two clauses *the mists dissolved* and *the sun rose* and the conjunction *and*. In Figure 5.2a, on the left-hand page the immediately obvious elements are the two columns – of writing and of image. I call that the 'highest' level, Level 1. Within each of the columns there are further units. The column of writing consists of three 'blocks', each with a heading, at Level 2. At one level further down, Level 3, the top-most block consists of two segments and the bottom-most block of three. Turning to the image-column, at Level 2, the column consists of two images, the one at the bottom much larger than the one at the top. The top-most image, Level 3, is relatively easily analysable into three elements: the left-most, the central and the right-most, together with the arrows which connect the left-most element to the central element and which connect that in turn to the right-most. In the original, the lower image (Level 3) shows a division of a pale pink background and a greenish-blue foreground, e.g. the digestive organs.

This simple description allows both the identification and the rearrangement of entities at the various levels. At Level 1, I can switch the left–right ordering of two columns, as in Figure 5.2b. I can commute elements from Level 3 across the two columns, as in Figure 5.2c. Now the sun no longer causes photo-synthesis but shines instead on the nether regions of the digestive system.

The effect is clear: when the two columns are inverted, the meaning is changed; though the page stays coherent. With other such changes neither the page-as-text nor the two largest elements any longer cohere (Figure 5.2c). There was coherence before; now there no longer is.

The ideational aspect – meanings about the world of states, actions and events in the world – is clearly involved in the commutation of Figure 5.2b. In a culture with

4 Digestion - the major stages

Autotrophic food energy
Autotrophic food energy is energy that is produced by plants and other organisms through photosynthesis. This energy is then transferred to other organisms through feeding.

Food glottation: food
The food that is eaten by the rabbit is called food. This food is then broken down into smaller particles through the process of food glottation. This process is carried out by the rabbit's teeth and the enzymes in its saliva.

Digestion (S) (S) (S)
The food is then broken down into even smaller particles through the process of digestion. This process is carried out by the rabbit's stomach and the enzymes in its stomach juice.

Think to do

1. A rabbit eats 10 kg of food each day. How much of this food is actually used for energy?
2. How much of the food is actually used for energy?
3. How much of the food is actually used for energy?
4. How much of the food is actually used for energy?

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Figure 5.2a 2002 Science: digestion

a left-to-right reading direction, left-most and right-most position have different meaning-potential: 'left', as the point from which I start, and 'right' where I am moving to, give different information value to what is placed there. So in Figure 5.2b, the physiological aspects of digestion are taken as 'given', as 'established', as 'what we already know'; while in Figure 5.2a it was the bio-chemical aspects which were presented as already known.

Figure 5.2c however, is not a coherent layout. Take the example of the change in arrangement of the Level 2 element, the image of *sun-arrow-plant-arrow-rabbit*. Here the original has a broadly (causal) meaning of 'sun (unit 1) provides energy (the arrow, unit 2) to a plant (unit 3) which (in a transformed state, suggested by the arrow (unit 4)) a rabbit (unit 5) ingests'. A rearranged version, say 4-5-3-2-1, has nothing like that meaning. We can labour and give it a reading 'a rabbit, identified by an arrow, has turned its back on a plant; for some reason it seems interested in the writing to its left, while the sun sets'. The rearrangement has led to a change, and to considerable puzzlement if not incoherence for a possible reader.

However, it might be said that this reordering affects elements of the mode of *image* rather than settling the question about *layout* – the arrangement of elements on a *site of appearance* – as mode.

Before answering this second question I turn to the third: 'Does layout enable us to represent meanings about social relations between those engaged in communication?'

4 Digestion - the major stages

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Digestion (S) (S) (S)
The food is then broken down into even smaller particles through the process of digestion. This process is carried out by the rabbit's stomach and the enzymes in its stomach juice.

Think to do

1. A rabbit eats 10 kg of food each day. How much of this food is actually used for energy?
2. How much of the food is actually used for energy?
3. How much of the food is actually used for energy?
4. How much of the food is actually used for energy?

Page 90

Figure 5.2b The digestive system: columns reversed

4 Digestion - the major stages

Autotrophic food energy
Autotrophic food energy is energy that is produced by plants and other organisms through photosynthesis. This energy is then transferred to other organisms through feeding.

Food glottation: food
The food that is eaten by the rabbit is called food. This food is then broken down into smaller particles through the process of food glottation. This process is carried out by the rabbit's teeth and the enzymes in its saliva.

Digestion (S) (S) (S)
The food is then broken down into even smaller particles through the process of digestion. This process is carried out by the rabbit's stomach and the enzymes in its stomach juice.

Think to do

1. A rabbit eats 10 kg of food each day. How much of this food is actually used for energy?
2. How much of the food is actually used for energy?
3. How much of the food is actually used for energy?
4. How much of the food is actually used for energy?

Page 90

Figure 5.2c The digestive system: rearranged

In Figure 5.2b, the order of the two columns is inverted. In this 'Western' example, the taken-for-granted reading direction ('where we start from and where we go to') is from left to right. In the culture for which this page is made the left-right ordering bears a general meaning of: left = information assumed to be 'known' and as 'socially given', and right = information regarded as 'new' information, as not known to the addressee and not shared by the social group.

The classification of information as either 'already known to the audience' or as 'new to the audience' has social and ontological consequences. In each case a particular status in relation to knowledge is (implicitly) ascribed to the audience, and further communication, further social interaction proceeds on that basis. That distribution of 'given' and 'new' ascribes, whether correctly or not, specific social characteristics to the audience. That ascription organizes the communicational relation of maker and receiver of the message in a specific way and, in that, has effects on their social relation. That meets the theoretical requirement of the interpersonal function.

To return then to the question of ideational aspects of this mode, which may be the most vexed. The organization of material through layout produces and realizes specific social and ontological arrangements in the world of this interaction. In social-semiotic approaches to multimodality it is an absolute assumption that modes have different affordances; *speech and writing*, for instance, 'name'; *image depicts*; *gesture enacts* and 'indicates', emphasizes and 'sketches out' themes and topics. *Layout* does not name or depict; it does however 'dispose', organize and indicate aspects of the social/ontological 'status' of representations, as 'known' and 'given' or as 'new' and 'unknown'. In doing that, *layout* 'orients' viewers/interactants socially, as 'part of my group or not'; epistemologically, as 'knowing or not'; and ontologically, in indicating the 'social status of knowledge'.

The disposition of elements in a framed space – a page, a screen – does not 'name' as words do and it does not 'depict' as (elements in) images do. It does however dispose information in semiotic space; it positions semiotic elements and their relations; it 'orients' viewers/readers to classifications of knowledge, to categories such as 'centrality' or 'marginality', 'given' or 'new', 'prior' and 'later', 'real' and 'ideal'. These are states of affairs in the socially made world, aspects of the ideational/experiential function; different to, yet as significant in their ways as 'naming', 'relating', 'depicting'.

If we do accord to *layout* the status of mode, it has consequences for how we think about the scope of the ideational function in comparison with the affordances of all other modes. Here as elsewhere, thinking about meaning and communication had been shaped by a previously unquestioned focus on 'language' as a full means of representation. We cannot afford to let older 'language-based' thinking to constrain how we see mode, in a semiotic theory. The consequence of a multimodal approach, of taking meaning seriously, is that rethinking, new thinking and, with that, new naming becomes essential. As I have pointed out in preceding chapters, what is needed are categories at a level general and abstract enough to encompass all the meanings of contemporary social life in the multimodal communicational world.

Mode, meaning, text: 'fixing' and 'framing'

A multimodal approach to representation offers a choice of modes. Depending on the rhetorical requirements and the media involved, there are different possibilities: do you wish to realize your meaning mainly as *writing* or mainly as *image*, as *moving image* or as *speech*? The existence of such choice reveals that 'meaning' does not 'exist' other than when it has become materialized, realized as mode or as a multimodal ensemble.

Semiosis, the making of meaning, is ongoing, ceaseless. Occasionally there is a 'prompt' to make that internal process visible, and there is then an 'utterance', an outward material sign-complex, always as a response to the prompt. It is a *punctuation* of semiosis: the ceaseless process of inner meaning-making is halted for a moment. It is 'fixed' and it is 'framed' (Kress, 2001). The example below, first discussed in Chapter 4, is an instance. A class of six-year-olds in a school in South London are taken by their teacher to the British Museum. On the day after their visit she asks them to write a 'story' and to draw a picture of their visit. The 'story' is reproduced again here.

When I got to the museum it looked bigger than I thought. When I went in I took off my coat and went into the men's toilet and after I ran upstairs I went into the lift. Then I went to see the mummies and all those stuff. Then we went to our cloakroom so we can get our coat and then we went to Waterloo station on a tube and a train to Clapham Junction and walked back to school and went home very happy and I told my mum, sister and my brother. The end.

The topic of 'story' and drawing were the same: the visit to the British Museum. Yet the mode of writing, leaning, at the age of six, heavily on the organization of the mode of *speech* and the spoken *genre* of *account*, with its semiotic logic of temporal sequence of action/events (here in chronological order) leads this young man to an entirely different representation to that in the mode of *image*. The written *account* implicitly poses the question: 'What were the salient events and actions and in what order did they occur?' The *image* with its spatial logic implicitly asks the question: 'What were the salient objects for you in that day and what ordering do they have for me?'

The relation of meaning and mode presents itself in three ways: First as a rhetorical issue, a matter jointly of modal affordances and of rhetorical requirements. Which mode is apt and therefore to be selected, given the rhetorical task to be achieved? Second, given the different orientations of modes and their different 'takes' on the world, it presents itself as an ontological and epistemological issue; this will be explored in the next example. Third, in the case of arrangements of several modes simultaneously, in 'multimodal ensembles', it presents itself as the question of which modes are to be selected and in what 'arrangements', a matter discussed in Chapter 8.

In a social-semiotic approach to meaning-making, it is seen as both social and external and social and 'internal'. There is outward social (inter-)action in which

meaning is constantly created, in a transformative process of interactions with and response to the prompts of social others and of the culturally shaped environment; and there is constant 'internal' action, an (inner) response in constant engagement with the world. Most of this semiotic action never sees the light of day, so to speak. When it does, when this flow is arrested momentarily by social and individual need and design, the question is: 'In what mode(s) should meaning be 'fixed'/?'. I am borrowing the metaphor of 'fixing' from older forms of photography, where a chemical substance on a film was the means of 'fixing' light and thereby 'fixing' that which was the subject of the photograph. Different kinds of chemical coating provided for different effects: most noticeably the difference between black and white and colour photography. This is the sense in which I take 'modal fixing'. *Image* and its affordance provides a distinctive 'take' on the world; a different take is provided by the affordance of *gesture*.

In the following two examples the topic of blood circulation is fixed in *writing* (in the genre of 'diary') and in *image* (in the genre of 'concept map'). The data comes from research in Science classrooms in London, with students around the age of 13. After four lessons on blood circulation, the teacher asked the students to 'write a story, imagining that you are a red blood cell travelling round the body'. This is one such 'story', in the genre of *diary*.

- 1 second Dear Diary, I have just left the heart. I had to come from the top right chamber of the heart (Right atrium) and squeeze my way through to the Right ventricle where the heartbeat got stronger and I left the heart.
- 3 seconds Dear Diary, I am currently in the lungs, it is terribly cramped in here as the capillaries are tiny and there are millions of us. We have just dropped off oxygen and picked up some carbon dioxide.
- 5 seconds Dear Diary, we have entered the liver where we had a thorough wash.
- 7 seconds Dear Diary, we have just visited a kidney where we dropped off some water which will be turned into urine.
- 10 seconds Dear Diary, I have just finished my journey round the body by stopping off at the heart.

In the written text, the affordances of *speech* are clearly in evidence, as actions/ events in sequence: 'I left the heart; I had to come . . . ; (I had to) squeeze through . . . ; the heart beat got stronger; I left the heart.' The genre of *diary* with its chronological sequencing, complements the organization of the semiotic logic of *speech* in its temporal sequencing. In the mode of *writing*, the topic is shaped ontologically through

the affordances of the mode as (events in) temporal sequence: the actions/events as well as the scientific 'entities' presented in the text-genre, are arranged like pearls on a string, in sequential order: *the top right chamber of the heart, the right atrium, the right ventricle, the lungs, the capillaries, and so on*. The genre of *diary* fits with this entirely: the temporal logic of *mode* complementing the chronological sequencing of *genre*.

The *diary* was written as homework by one student; the *concept map* was produced by two students jointly in class on the following day. Many of the same scientific entities appear in both, though now organized through the affordances of *image*, using the semiotic logic of *space* and the modal affordance of spatial relations between simultaneously present entities. This is a profoundly different ontological organization: not as temporal or linear sequence, but as a hierarchy.

Whether for science or for everyday issues, it matters which mode is used to 'fix' meaning. Scientific conceptions as much as everyday 'common sense' are shaped by that decision. Once a particular means of 'fixing meaning' has become habitual – whether in *image* and formal accounts of 'proportions' as in the genre of *pie charts*, or in *writing* as actions and events in genres such as *diary* or *recount* – it is likely that the world represented through these *modes* and *genres* comes, ever more, to be seen like this 'naturally'. *Modal fixing* provides the material from which text, ontology and 'knowledge' can be shaped via framings of different kinds; the frame of *genre* being one such. That then provides a 'take' on the world which comes to organize and shape our encounters and engagements with that world.

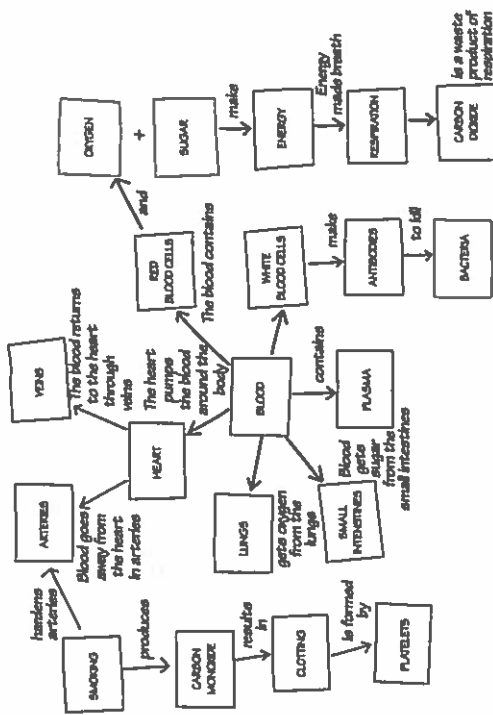


Figure 5.3 Blood-circulation: concept map

Mode as technology of transcription

The 'take' on the world – in manner, in potentials for engagement – has consequences. In many social domains it is important to be as specific as one can be in the context in which one is writing, acting, talking, researching. Each requires tools of a specific kind. Research needs specific data to answer the research questions posed. So maybe the first step is to ask: in what domain am I operating? Is it that of politics, of public information and awareness-raising? Am I addressing policy-makers or teachers, parents or journalists? Am I attempting to produce useable accounts of complex phenomena by means of academic research?

My interest is in developing precise tools for understanding the interrelation of resources of representation and forms of knowledge; of the effects of both in shaping environments; and these in relation to the facilities, affordances, potentials and limitations of contemporary technologies of representation/production/communication.

In much of this area there is a current fashion to use the term 'literacy'. Multimodality in a social-semiotic frame offers a different approach. If modes differ in their affordances, it is evident that they configure the world differently, often profoundly so: as the earlier discussion was meant to show. They can then be seen as 'technologies of transcription'. If *image* shows the world, then that is different from words in *speech* or *writing telling* the world. In that perspective, modes offer distinct ways of engaging with the world and distinctive ways of representing the world. They offer different and distinct potentials for presenting the world; distinct possibilities of *transcription*; and, with that distinct 'cultural technologies' of *transcription*.

'Literacy' might usefully be the name of one such technology, offering one specific form for the transcription of specific kinds of meanings. However, it names just one of many such *cultural technologies* of transcription. One problem then becomes describing the different technologies for transcription potentially available in any one society and finding apt names and terms for them. The other, more significant part, is to develop adequate descriptions of the *affordances* of all the modes and identifying their potentials in representation and communication. Questions such as: 'What semiotic work needs to be done?' need to find an answer; or: 'What semiotic work can be done with a particular mode?' and 'What are the best means for achieving my rhetorical aims in my semiotic designs?'

We've been taught to think that writing has been developed to transcribe speech; we also know that, really, that isn't the case. Here comes the first problem: in talking about 'literacy' are we talking about *writing* or about *script systems* or maybe both? Alphabetic and character-based scripts both developed from image-based forms of recording. In the case of alphabetic scripts, image-script developed – among other things – into a means of transcribing (aspects only, of) speech. In the case of character-scripts that route was not taken, or not to anywhere near that extent. In so-called literate societies, alphabetic writing is only rarely used to transcribe speech: it can be, but that is a relatively marginal use. Yes, there is a constant semiotic trade between speech and writing and not only in forms such as texting, or MSN. But most

of the time writing is used as a means of transcribing phenomena, events, objects, ideas that are about in the world, directly, not via the route of speech. The *minutes* of a meeting for instance – an event in which speech is the foregrounded mode – are not a transcription of the actual speech-sounds (or words or phrases) of what was spoken but represent the 'gist' of what was transacted.

With the concept of *transcription* come questions such as: what is (required to be) transcribed; what is not (to be) transcribed; what can and cannot be transcribed with any one technology of transcription? Both the potentials and the limitations of transcriptional resources come into focus. We know that the alphabet does not transcribe intonation. At the same time we know that – in speech – intonation can be as important and at times more so than words in syntactic order; and so can hesitations, loudness or softness, pace or 'tone of voice'. Every technology of transcription has potentials and limitations, *speech* and *writing* not excepted.

The digital media of representation/production/communication facilitate the use of many such technologies of transcription: modes such as *speech*, *moving image* or *still image*, *writing*, *colour*, *layout* all appear and are available to be used. Multimodal representation is possible at little 'cost'; the affordances of multimodal representation are readily available for use in designs of environments of communication or of learning. In multimodal design one needs to ask specific questions about what is to be transcribed, what can be transcribed or for whom the transcription is intended. This requires precise tools and if not (yet) settled then certainly useable understandings of the capacities, the affordances and facilities of these tools. But more: we need to know about what kinds of meanings are made in the various cultures of our societies. Which of these meanings can or should be transcribed in what environments and by what technologies of transcription, by what modes? Do we actually understand the meaning effects – ontologically, epistemologically, politically, socially, affectively – of different transcriptional technologies?

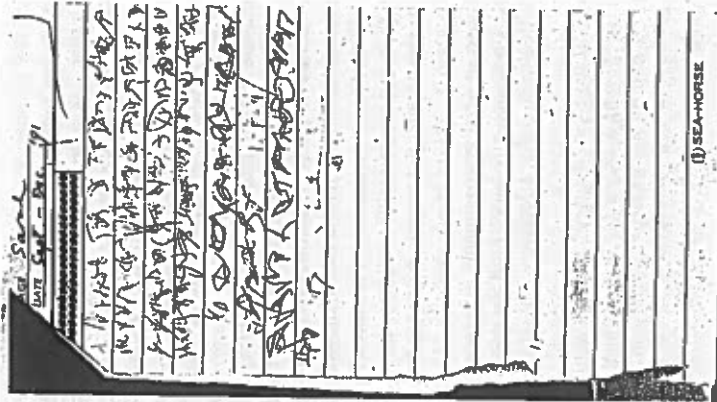
Assume that we continued with present uses of the term 'literacy'. How do we deal with the differences between an *alphabetic script* and a *character script* and their profound meaning-effects? What questions do and do not emerge; which can and cannot be posed?

Here are two bits of material 'stuff', which need some accounting in a theory of communication, meaning and learning. The 'writing' in Figure 5.4 was done by a three-year-old girl. At one level I see it as her attempt to make sense of alphabetic writing. If my perspective now is that of learning, I will want to see and understand it as a 'sign of learning': what does this semiotic object reveal about what this child has learned? Well, the 'writing' is displayed on a line; its elements are simple; some of them look as though they were repeated and some not; the elements are in sequence; many of the elements are connected; the writing has directionality.

Figure 5.5 shows a similar and different example. The effect of the different script system is evident immediately. As with the alphabetic 'writing', this is the trace of semiotic work done on a bit of the culture with which the child has engaged. In describing this we might say: the writing is displayed on a line; its elements are



Figure 5.4 Alphabetic writing

Figure 5.5
Character-based writing

complex; each differs from all others, none are repeated; they are in sequence; each is separate; elements are not connected; there seems to be directionality.

There are common features – display on a line, directionality, sequence – and there are features which are distinct. But there is another issue, at a more abstract level maybe, which relates to meaning and learning: the issue of learning, of the body, of embodiment and identity. It relates to actual material, bodily, production: the physicality of the placement of a letter on the line, movements of linking, the length of down-strokes and up-strokes, the shape of curves and lines. What is learned and embodied in these actions? Linearity, sequence, spatial disposition, limits of size

and extent; but also notions of repetition, of the relative simplicity or complexity of the entities. What is learned is how the hand moves, which, in the case of the forming of a character consists of very different movements to those in the forming of a letter; the pen or pencil held differently; the hand not resting on the surface of inscription. In the case of the production of alphabetic writing there is the insistent feature of the line; in the case of the production of a character, there is the placement/balancing of the character in a square – actually present on pages designed for the early stages of learning; and later on present as an imagined square.

There is also – a different matter – the fixed sequence of strokes to be learned. Learning the fixed sequence of strokes in the making of the character entails the learning of a metaphor of social order, equally firmly fixed. The perfect balancing of the character in the actual or imagined square naturalizes a specific framing of the world, just as the placement on the line 'teaches' and naturalizes linearity, sequence and progression. Both script-systems embody and 'naturalize' ontology, epistemology and social order.

At this point we can give an answer to the question 'What has been transcribed here, in the writing of these two young people?'. Part of that answer is: 'All of the above.'

This approach raises the question whether 'literacy' – as script or as writing system – is separable from other 'cultural' organization? The meanings which inhere in the script-system are meanings produced in that society as general semiotic features. Is it an accident that cultures which use alphabetic writing have representations of time as linear, sequential, directional? I want to explore some aspects of this issue by means of a few examples. These come from the research work of Sean McGovern, to whom I am indebted for permission to use examples from his data. He shows how semiotic organization appears in different technologies of transcription/realization. In that view 'literacy' (the script system together with the grammar and syntax of writing) as well as spoken language and its organization, are one kind of manifestation of a 'deeper' cultural and semiotic organization which also emerges in specific ways in other, different 'transcriptional systems', with the different materiality of the resources in which a mode (as transcriptional resource) is realized.

Here, to frame this bit of the discussion, is an entirely usual Western timeline (Figure 5.6). The question is: is it an accident that in Sean McGovern's data, the 21-year-old students who were invited to draw their 'biographies', represented time in a variety of forms which, in one way or another, seem to be shaped by and to realize the notion of 'centrality'? One of these, Figure 5.7, was titled 'The tower of my memories'. The drawing is placed centrally on the page; it is composed of modular elements. It is not directional in the sense of Aristotle's arrow of time in the timeline of Figure 5.6, going from left to right. Experience is represented as *spatial* and *modular*, as a *spatial composition*; the tower is built of modules of experience. It is not *temporal* and *continuous*, as a *chronological display*. At the moment captured in the drawing, this person might be asking 'where does the next module-block of experience fit?' Experience, time and future are very differently conceived here compared to Western notions.

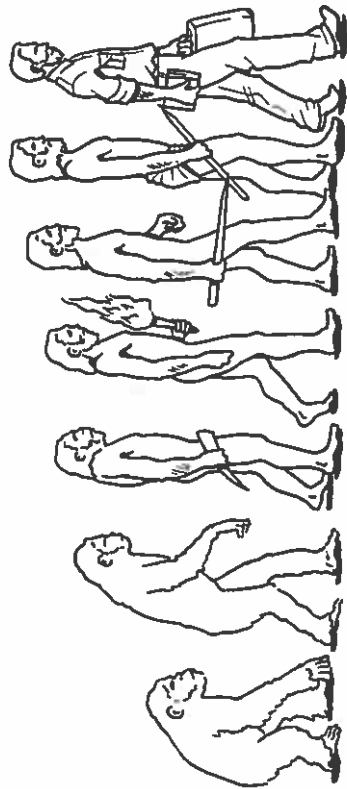


Figure 5.6 Western timeline

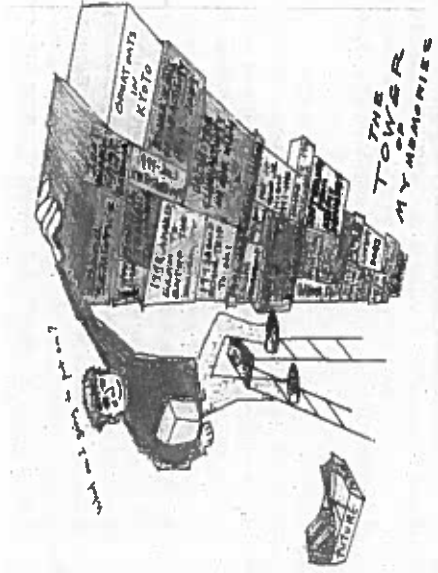


Figure 5.7 The tower of my memories

Two more examples can illustrate the notions of centrality and modularity. Figure 5.8 comes from an exercise in which the student subjects were asked to explore the highly abstract notions of 'dependence' and 'independence'. Both *module* and *centrality* are used as compositional elements and principles.

Figure 5.9, lastly, shows the well-known lunch-box of Japanese take-out. Modularity is the dominant principle. From one perspective one can see 'the meal' as shaping and prefiguring the modular organization of the lunch-box; from another one can see the form of the lunch-box (pre)figuring, shaping and constraining the organization of the meal. Both perspectives are valid: these are mutually constructing and determining social practices and cultural forms.

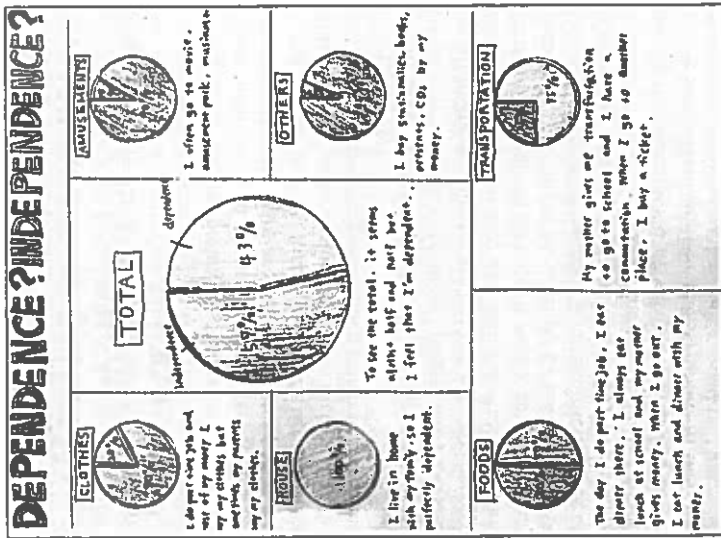


Figure 5.8 Modular layout: 'dependence' / 'independence'

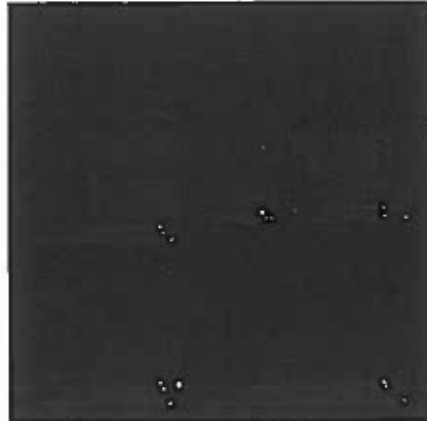


Figure 5.9 Bento box

This discussion is motivated by the need for precise theoretical/descriptive/analytical tools. The distinct affordances of modes offer the potential for better transcriptions of the world or those parts of it that we want to transcribe, along the lines of what is offered by each mode. Imprecise tools hold out the promise of answers; and they mislead. The term 'literacy', whatever the prefix (e-, media-, mobile-, computer-, visual-, emotional-) becomes ever more vague the further it is extended. In the end it obstructs the uncovering of central aspects of meanings that ought to be transcribed in any culture, whatever the means of representation and dissemination. There are specificities of meaning to which we ought to attend. Using the term 'literacy' has one advantage: it draws attention to the fact that 'there are things to attend to here'. As a message to policy-makers, teachers or parents, that is important. As a tool for research or theory-making it obliterates vast areas of significant specificities. For the everyday task of drawing our attention to that variety of meaning which we make and which surround us it is too blunt an instrument.

When referring to script and writing, the notion of literacy is problematically imprecise. It becomes an obstacle when extended to other modes and processes of representation. The distinctive affordances of modes are brushed over and become invisible, whether those of *speech* and *image*, *writing* and *sound-as-music*, *moving image* or *three-dimensional objects*. Multimodal production is now a ubiquitous fact of representation and communication. That forces us urgently to develop precise tools requisite for the description and analysis of the texts and semiotic entities of contemporary communication. Social diversity requires attention to careful design in representation. The increased availability of resources and the facility for the design of messages bring the need for careful questioning of what meanings are to be transcribed and what resources are best suited for their transcription. In this, the presence of the digital media, if anything, adds complexity and urgency.

6 Meaning as resource in a multimodal social theory

Naming aptly

The Arts, the Humanities, the Social Sciences than *speech* and *writing* in their distinct disciplines from the perspective of its concerns and its questions of 'names' but one of 'fit'; and that problem has areas of meaning and all means of representation frame, without introducing problems about the integration of existing terms. The second is that the newly integrated field will exhibit gaps which point to possible new kinds of relations that were not visible or did exist in the formerly discretely framed and bounded areas. The third aspect is that questions arise about the 'fit' of the kinds of entities, relations and processes necessary to describe that unified, larger and yet, at some level still highly diverse field.

Each of the disciplines has had and still has its distinct perspectives; each witness that focuses on specific aspects of the world under investigation. The names used reflected that focus and the interests of a specific discipline. So for instance, (how) we now use terms such as *text* or *concept* in the integrated field? *Text* comes from Linguistics by and large; *concept* from Psychology. Naming the new field in a full, coherent manner is the task of *social-semiotic* theory. New entities, new relations, processes need new names. The problem is that the names – as *words/signifier* which already exist are full of the meanings of the places from which they come.

When Thomas Edison discovered that an electric current, passed through a vacuum placed in a glass container in which a vacuum had been produced, would make wire glow, he realized that this could revolutionize means of lighting. There is then the small problem of how to name that new object. Obviously, 'light' might be an important aspect of the name and so might the shape of the object. From among names which seemed plausible for the shape, 'bulb' – as in an 'onion-bulb' – was chosen. And so English speakers learned to live with 'light-onions'. To German speakers, cause of the light – the glowing wire – was significant; and the shape seemed more like that of a 'pear' and so they got their 'glowing pear' – the *Glühbirne*.

The question 'Which is the more plausible?' hardly mattered in this case. Speech of each language have managed fine with the metaphor that they got; even if it could give rise to some mild amusement when one points out the literal translation from