MULTIMODALITY

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Why? and why now?

Over the last two or three decades a revolution has taken place in the area of communication which forces us to rethink the social and the semiotic landscape of Western 'developed' societies. The effect of this revolution has been to dislodge written language from the centrality which it has held, or which has been ascribed to it, in public communication. Perhaps the most obvious example is the increasing prominence - dominance even - of the visual in many areas of public communication as well. While this is obvious, the implications of that shift have not in any sense begun to be drawn out or assessed in any coherent, overt, fully conscious, and consistent fashion.

But the visual is just one example. Other modes of communication have become prominent; and increasingly significant in public communication. At times we tend to shield ourselves from these changes, not wishing them to be the case, treating them as peripheral, as explicable in the framework of existing language-based theories of communication. Yet these theories no longer work in relation to the new communicational situation. Other modes are increasingly pushing into the centre of public communication: music; and the body and its movements. The case of music allows us to make a distinction between the contemporary situation, and its trends and those of the more immediate past. Of course, it will be pointed out, music has been a constant feature of human societies. Yet over the last century or two, however, the actual elites of Western Europe decided to break the continuous chain between music in its everyday appearance and music as an aesthetic form, or music in its ritual aspects. A deep division has been produced, so that the latter two have remained the subject of attention for the elites: not now as everyday forms of representation and communication, but as forms which belong entirely in the domain of the aesthetic and of good taste. Music is now no longer seen as a form of communication but as a means of expression; the same has happened with the visual mode and others.

The general effect of this, and of the very similar movement in relation to the visual - with fine art separated from other forms of visual expression - has been to leave the two modes of the visual and of music outside a general theory of communication, to leave them unlearned, or at least undertheorised, and certainly to take them out of the school curricula, except as specialist activities. As a consequence we, in the 'West', find ourselves singularly ill-equipped in the new landscape of communication, whether it is generally speaking, or institutional and non-institutional education.

The revolution which we discern is likely to continue, and perhaps even to intensify, as the reasons for its inception are, if anything, increasing. These reasons range from changes of a social and cultural character to those more to do with technologies of information and of transport; to far-reaching economic changes in the post-industrial societies largely of the northern hemisphere. An instance of the first kind is plural-culturalism, whether internationally and regionally, or internationally and globally. It ensures that the most valued communicational modes of any one society are unsettled through the contestation by the valued forms of all the cultural groups. Perhaps predictably, this unsettling affects written language most intensely, and first of all. Technologies of information lend themselves to 'visualisation', the phenomenon in which information initially stored in written form is 'translated' into visual form, largely because the transport of information is seen as more efficient in the visual rather than in the verbal mode. Economic changes in the post-industrial world are in any case likely to be characterised 'information-driven', or knowledge-based. And, as one other and fundamental reason, it may be the case that information of various kinds may be more aptly expressed in the visual rather than in the verbal mode.

In other words, there are the strongest possible reasons for taking a completely fresh look at this landscape, and for setting a quite new agenda of human semiosis in the domain of communication and representation. Such an agenda has, as some of its most urgent elements, the requirement for a theorisation and a description of the full range of semiotic modes in use in a particular society, a full understanding of the potentials and limitations of all these modes; of their present use in a society; of their potentials for their interaction and interrelation with each other; and an understanding of their place and function in our imaginings of the future. This agenda will be founded on an appropriate theory of semiosis. Present theories are inadequate both because they are founded on an understanding of one (multi)mode - language - alone, and because that understanding misconceives the fundamental characteristics of human semiosis anywhere and at all times. The need for this agenda exists equally in industry and in education; in institutional as in international communication.

The appearance of modes other than language in the centre of the domain of public communication has several aspects: new, or newly prominent
modes appear: texts, textual objects are more clearly seen to be multimodal that is, to be constituted by a number of modes of representation. This is one major reason why theories of semiosis have to deal with objects which exist in modes other than language, as well as treating all text-like objects as multimodal. Importantly, the question arises whether modes such as 'written language' or 'spoken language' can, in any case, be regarded as 'more modal'; in fact, my view is that they cannot. This means that we have to rethink 'language' as a multimodal phenomenon. Our present conception of language is revealed as an artefact of theory and of common sense.

A large range of questions opens up. This chapter will deal with those which are central for the purposes of this book. First is the issue of the relation of 'modes' and of the 'material stuff' through which a mode is realised, which has to be related to the human body, its 'senses', and its engagement with the world. Second, there is the relation of semiotic mode to the medium of transmission or propagation.

The body's potential for engagement with the world: mode, materiality and medium

The issue of multimodality reminds us forcefully that human semiosis rests, first and foremost, on the facts of biology and psychology. Human bodies have a wide range of means of engagement with the world; a wide and highly varied range of means of perception. These we call our 'senses': sight, hearing, smell, taste, feel. Each is attuned in a quite specific way to the natural environment, providing us with highly differentiated information.

Of course, none of the senses ever operates in isolation from the others – other than in severe pathologies. That, from the beginning, guarantees the multimodality of our semiotic world. How a culture selects from its range and chooses to develop these possibilities of engagement with the world is a quite different matter in each case. In fact the argument of this chapter is that so-called literate Western societies have for too long insisted on the priority of a particular form of engagement, through a combination of hearing and sight with the sense of hearing specifically to the sounds of speech, and the sense of sight specifically to the graphic representation of sounds ('letters'), on flat surfaces. This combination, in which for some time now writing had come to have priority of value over speech, has been dominant at the expense of other uses of sight, as in relation to visual images for instance, and of course dominant at the expense of all the other senses and their mode of engagement with the world. This has gone so far that we have no means of representing whole areas of our sensory lives by either talking or writing. For instance, it is a common-sense notion that we cannot talk about tastes, not just because we have not developed an adequate set of words or an appropriate syntax for this in spoken or written language, but, so this common sense would have us believe, because tastes.

smells, tactile sensations, and the like cannot be the subject of articulated sentiments.

To begin with the sensory of our semiotic (rather than our physical or physiological) world. Here the question is: what (physical) materiality of representation has a society used and still uses; and to what degree has it developed that material into an articulated representational resource? By materiality I mean the 'stuff' which a culture uses as the means for the expression of (its) meanings. This can be physical stuff; (variation of) sound for instance; or marks on a surface, apprehended via the 'stuff' of light. At this level, materiality marks the interface of the natural world with the cultural world – facilitated by the fact that there are bodily means of appropriation of these materials. Not only sight or sound but also the sense of touch could of course be used, in a highly articulated form with braille; or in a less highly articulated form in the multitude of ways in which materials 'communicate' to us via our sense of touch – the texture of wooden surfaces, of concrete, of materials, and so on, used to varying degrees and often highly consciously and deliberately for purposes of representation and communication – for example, the lightness and smoothness of silk, as against the weight and roughness of the material of jeans.

But 'materiality' can also have a non-physical, appearance: the more a particular kind of material has been worked, culturally and semiotically, the more this 'secondary materiality' is available itself as 'material' for semiosis. For instance, languages have, usually, a highly developed lexicon, which is differentiated according to social and cultural factors, such as social categories of various kinds, or aesthetic categories. So certain areas of lexical will be regarded as 'lower-class', 'macho', 'highbrow', etc. This social/semiotic organisation of signifier-material is itself usable as material from which to make meaning; for instance, selecting certain kinds of words systematically, when less of a different kind might be expected, and so on.

In fact, most signs of social semiotic systems are of that kind, and work on and with that sort of material.

I use the mode to refer to the (full) semiotically articulated means of representation and communication. So for instance, graphology is a mode. It uses the materials of some physical surface (paper, metal, stone, cloth, canvas, and so on) which is physically marked in some fashion, whether by the application of a substance, such as ink, or by some other means such as incisions, scratching, or etching. There is, at the same time another 'material' involved, namely the more abstract organisation of the marks as a representational system. There is, then, further representation of that system existing in the interior of the brain in some form of neural organisation. On the basis of all these we can produce external representations. The example of graphology indicates that the transcriptional system of writing is a multimodal system. Graphology, as a mode, has a
meaning-making potential which is quite separate from the meaning-making potentials of other aspects of the multimode of writing, quite different for instance from lexis, or from word-order (sequence on the page), or syntax (a more abstract level of representation). Language in the spoken mode is yet another multimodal system; it uses the whole plethora of devices available to speech – pace, pitch-variation, rhythmic variation, tone of voice. But it also makes use of the potentials of temporal, sequential ordering available to this time-based mode rather than the initially spatially displayed mode of writing.

The suggestion that language – either in the spoken or in the written mode – is a multimodal system may seem outrageous; we have been taught to think of language as a single and homogeneous system of representation, notwithstanding the fact that its definition is, to say the least, fuzzy round the edges. It is not clear, for instance, whether rhythmic features, or tone-of-voice, sex-specific or culture-specific aspects of sound, are in out of the language system; it depends largely on who makes the definitions which of these features is considered. Intonation is very likely to be considered in the system, while rhythmic (rather than accentual) aspects may be ‘out’. Tone-of-voice is very likely to be considered ‘extra-linguistic’, as will sex-specific and culture-specific aspects of the voice. The fact that these latter two are entirely systematic (there is an innately muscular/gestural disposition associated with every language, and with every dialect) is likely to be disregarded. The very high degree and long history of theoretical investment in the description and theoretical articulation of language leading to concepts such as the grammar of a language have made it difficult to see this phenomenon freshly.

By looking at a different ‘language’ – sign language, for instance – we may be able to see the matter of multimodality more clearly. Sign language (the German term Gehörtauschsprache – gesture language – it actually preferable, as it avoids the commensurability temptation to see sign language as simply a translation of verbal language) has, over the last decade or so emerged from under the previously skewing influence of linguistics (though, it has to be said, with the aid of some linguistics coming from traditional forms of linguistics). Researchers now working on and with sign language are able to see it with fewer constraints, and freshly. This makes it possible to describe it as a multimodal system, using its own distinct ‘material’: facial expressions; disposition of the mouth and eyes; movements and dispositions of the arms; of the fingers; the general attitude and disposition of the upper part of the body. All of these are seen as independent meaning making systems, which are however coordinated so as to produce a single, if complex, integrated and differentiated text-message.

Lastly, the issue of the medium, that is the issue of transmission and dissemination. Again, this is complex, but it is possible to start with some relatively straightforward instances. All those aspects have to do with the

Som e key examples

The issues of multimodality can be thought about in a least three distinct and related ways. First, all texts are multimodal. It is my contention that no text can exist in a single mode, so that all texts are always multimodal although one modality among these can dominate. Second, there are texts

\textit{'transport'} of the (complex of) sign(s) – the text/message – as being an aspect of medium. In the case of speech, the medium is air. Other media – other means of transport – may interfere themselves, with specific effects. In the case of speech, for instance, variations of pressure, and then re-converted into variations of pressure in the medium of air. Just as there are multiple modes involved in the production of any text, there are multiple media. In the case of speech, for instance, I paid no attention to the medium of the (so-called) speech organ. The matter of media needs close investigation, and theorisation together with the question of multimodality. As far as speech and radio are concerned, obviously the shift from the medium of air, to the interposed electric/electronic medium is one of the factors leading to the possibility of mass communication, with its quite enormous social, cultural, and individual consequences. From a usually one-to-one, face-to-face interaction, the mode of speech is moved to a one-to-many and impersonal interaction. This indicates the kind of meaning-effects of changes in media. If mode affects what can be said and how, media affects who can be addressed and how.

Mode and materiality, through their close relationship with the body’s means of taking in information, and its possibilities of engagement with the world more generally, have wide repercussions for the issue of subjectivity. The selection and concentration by a culture on one or several modes (and the non-selection of others) opens up and facilitates my bodily engagement with the world in these specific ways. At the same time it closes off, or makes more difficult, an engagement with the world in other ways. The focus on print engages my visual sense, and focuses all energy there. It ignores (and thereby effectively negates) all other senses. Two-dimensional interaction offers quite other possibilities than three-dimensional; the senses of touch and smell have different cognitive and affective potentials from the senses of hearing and sight. Assuming that we, as biological and physiological beings, are not all equally disposed to the forms most developed and valued by one cultures, some members of one cultures are less well served than others; some will be affectively and cognitively at an advantage over those whose preferred sensory modes are not valued or are suppressed in their culture. There are very large and increasing significant questions in this area, questions which need a resolution before too long.
the meaning of its touch, its weight, its temperature, the feeling of the embossing, and the taste and texture as I drink the water. This is consumption in the literal sense, it is use for physical, bodily physiological reasons: it is reading with the body. However, it would be entirely incorrect to assume either that this use is not fully semiotic; it is cultural; it is based on cultural training; and it is entirely connected with the multimodal semiotic of the first kind of use. The two are entirely connected with each other. The clear-glass bottle's 'delightfully still' already conjures up and disposes me towards a certain kind of taste. More, it expects me to behave in certain ways: namely to expect and summon 'stillness', even in anticipation; to have certain cultural, social and personal dispositions; to be a certain kind of person. And when the label on the back declares that its contents come 'from deep within the chalk of the Hampshire Downs, protected for millennia from the environment' it is registering an immeasurably complex reassessment of myself in relation to this newly re-classified environment, an entity until now to be protected, but now hostile: the environment from which both the water and I need to be protected.

The enormity of this ideological move, as with its political consequences (what you can now legitimately do to this environment!), are hard to overstate. But in this complex semiotic weave, older notions of 'reading' and newer ideas of 'use' are entirely indistinguishable. When I read the description I am positioned in certain ways: when I drink the water I am already prepared to be still in order to drink stillness. The feel and look of the clear-glass bottle; the coloured image of the English country house; the evocation of English landscape (the Hampshire hills - both Thomas Hardy and Edward Elgar are distantly brought to mind, as is the voice, for readers of my age, of John Arlott, the cricket commentator). All these form part of a reinforcing mesh of meaning. In a multimodal approach to human/social semiosis the metaphor of 'consumption' makes a new sense; and ideology becomes both a style and a semiotic matter. The concept of communication - as transport and transformation of meaning - is hugely extended in a multimodal approach to semiosis. The involvement and engagement of our bodies makes the semiotic senses of meanings organised from a particular position) truly a lived experience. In this example there is the use of language, on the label on the front of the bottle, and also the label on the back. I have not, by all means, a full description of the multiplicity of signs involved: the light blue colour of the label; the fake 'royal arms' suggesting the accolade of 'By Appointment'; the range of colours in the multicoloured, monochrome representation of the country house on the label on the back of the bottle; and so on. But as there is language involved it may be felt that, 'in the last resort', it underpins the possibility of consumption.

The Sévres spoon-rest, on the other hand, is part of an eighteenth- century porcelain dinner-set, displayed in the porcelain room of the
Victoria and Albert Museum. It caught my attention because I had never come across such an object. That in itself is significant. It may well be that in certain cultural groups even now a spoon-tray is as usual an object as an ashtray is for others, in its setting. Both my interest and my ignorance point at once not only to the cultural and historical specificity of the object but to the fact that it is embedded in a web of cultural practices. These are practices performed by humans, so that humans have to be trained, educated, or socialised into performing them. That educational process means that the use of the spoon-tray becomes 'natural', and that the meanings of that use are also naturalised, just as are the meanings of the ashtray for the group for which it is a naturalised object - 'don't drop ash just anywhere!' The object - appearing without the support of any language - communicates as effectively as does the written text of a set of instructions. The appearance of the object on the dinner table is - for the individual who is socialised into its use - an instruction, a command, as potent as any spoken command. It is also a prop to the individual's subjectivity: a semiotic item in its proper place in the vast structure of meaning of life.

But although the spoon-tray is unsupported by language, it is nevertheless multimodal. There are, first, the modes of the material itself - the preciousness and delicacy of porcelain and its meaning in eighteenth-century Europe (only a few decades after the re-invention of porcelain in Europe at the court of the king of Saxony, breaking the monopolies of Chinese imports), and of the shape - a small square (about 10 cm square) with its raised edge (about 1.5 cm high), slightly undulating at the top, the colours painted on the surface and glazed into the object - light pinkish reds, a gold band along the top edge. The person setting the table, though not the people 'using' the spoon-tray, would have felt its weight and its texture, and heard the sound of spoon on spoon-tray, just as the mineral water bottle exists in a meaningful system of shapes, each with particular local biotic meanings, so the spoon-tray once stood in a relation to other objects which functioned as receptacles for spoons on the dinner table; in relation also to the other elements of the dinner-set; as well, of course, as its relation to the unspoken and unexpressible possibility of the absence of such an object. I do not know the system of objects involved. The point here is simply to draw attention to the power of the 'object without language' to communicate, to mean; to its role and power in a vast semiotic structure, and in the support of individual subjectivity. The spoon-tray speaks of naturalised practices which reach deep into the psychic-cultural constitution of the people using it. It speaks of a human subjectivity built on refinement and exhibiting naturalised sensibilities and taste.

A particular kind of object gives insight into complex social practices, and into their individual ramifications. The spoon-tray probably existed as one example of a multitude of such objects, so that discrimination, refinement and discrimination - distinction in Bourdieu's use - could be shown by the choice of a particular example. In the case of the spoon-tray, its existence speaks of utility - perhaps saving the table or the tablecloth from getting stained; or perhaps - and more significantly - saving a diner from the painful experience of having to place a spade on a dinner table. These are culturally 'produced' effects (they are, after all, not absolutely essential to human survival); they have, nevertheless, an essential utility in the group which has come to use it (you can't possibly set a dinner table without a spoon-tray).

The point is to insist on the semiotic, communicational, and meaningful aspect of objects. In the spoon-tray use is dominated by reading; though reading is not absent. Perhaps the most productive theoretical approach is not to insist on the distinction of reading and use at this level, but leave it as one means of articulating the differences due to specific, mostly of body, engagement with the world: 'reading' as the term for engagement, through sights, with letters, predominantly; 'use' as the term for engagement, for instance, through touch with three-dimensional objects; recognising that each exists in both. The fact is that at the moment we tend to speak of having seen a film; of watching television; of using a CD-ROM; with videos closer to watch than to use. However, in more theoretical debates it is entirely usual to speak of using video; less common to speak of using film; though in earlier debates in mass communication theories the notion of 'uses and gratifications' was well established.

These examples show that the degree of elaboration and articulation of a semiotic mode is important. Is it systematic and highly elaborated? Is it weakly elaborated? And is it systematically relatively local, focused on small groups? As an instance of what we mean by 'elaboration', take the mode of lexia. Halliday's (Halliday 1978) work on anti-languages (see also Hodge and Kress 1988) speaks of the lexicalisation of a particular domain (an idea widespread in linguistics, even if under different names, such as semantic field), and suggests that a domain may be overlexicalised - reflecting intense social-cultural concern and energy - or underlexicalised, reflecting relatively low levels of concern. So the various modes brought together in the multimodal system of language are generally speaking highly elaborated, in syntax, in lexia, in phonology, etc. The multimodal system of 'crockery' - that is, the system of objects integrally involved with social practices of domestic food consumption - is less elaborated, though differentially so for different social-cultural groups, as the example of the spoon-tray shows.

The issue of the materials through which the semiotic mode is realised is crucial for any reason because of their representational potentials and because of their cultural valuations. Clay has different representational possibilities from porcelain, or from jade, or from paper - though there may be attempts on the part of the makers of objects to force one material in the direction of the potentials of the other; to make marble imitate the...
luxuriant folds of cloth for instance. The materials, apart from their inherent representational potentials and limitations also have culturally ascribed value. These no doubt derive in the first place from inheriters (or seminarians) of natural qualities and characteristics, such as scarcity, hardness, malleability, colour, durability; ability to be inscribed, incised, and so on. So marble has inherent potentials as a representational medium due to its characteristics, and yet others due to its ascribed value in a particular culture. It is no surprise that it is a material favoured for monuments in European cultures. The early European explorers of the various parts of the globe made very good use of these factors – snipping glass beads and blankets for desirable bits of food.

The statement made somewhat earlier that language is itself a multimodal phenomenon may seem unnecessarily provocative, or courageous. In sign languages such a statement describes what is now commonplace. So in an introduction to this subject the modes out of which sign languages are fashioned are described in this way. The author of the next extract first lists the communicational media involved:

**Communication-media of gesture language**

**manual media:**
- hands and arms

**non-manual media:**
- facial expression
- looks
- head
- upper part of the torso
- the configuration of the mouth [the 'mouth-image', [mouth]]

She then goes on to say:

usually, when we think of gesture language, we tend to think of the use of the hands. Linguistics began with the study of hard-signs, when they began to write their dramatic study of gesture language. It became clear later that the non-manual channels of gesture language were used, not only for the expression of emotional or attitudinal states of the 'signer' – just as hearing people do with non-verbal means – but especially that these channels are of central importance for the communication of the grammar of the language. Because of this relatively late discovery we now know more about manual aspects of the structure of gesture language than we do about the non-manual.

(Boyce Braen 1990)
no purely verbal language ever entirely achieves total effability; 
think of having to describe, in words alone, the smell of rosemary. 
We are always required to supplement language with ostensive, 
expressive gestures and recalled 'iconic' features. Nevertheless, 
of all semiotic systems, nothing rivals language in its effability. 
(Eco 1996)

While Eco's finely nuanced statement remains short of claiming 'total 
effability', it does claim an exceptionally privileged place for language. 
The assumption underlying a multimodal approach to communication (and 
representation) is that, on the contrary, human use means made 
available in their cultures for representation precisely because these offer 
differing potentials, tools for representation and for communication. For 
instance, one of the reasons why sound became the favour ed medium for 
signs in that it enabled the speaker and the hearer to communicate; 
similarly motivated reasons are given for the invention, development and 
continued use of writing. The issue is made more difficult because the 
(Western) accounts are by and large accounts which take Western forms of 
communication as unquestioned norms. Cultures other than 'Western' 
ones have, as we know, made use of different materials, and developed 
different modes: the cultures of communities of the totally speech- 
impared, in relation to gesture languages, and Aboriginal Australian 
cultures in relation to visual representation being very good but by no 
means unusual cases in point (see, for example, Sacks 1996).

A further two assumptions, as implied earlier, are that the various modes 
have particular potentials and limitations; and that different modes have 
been developed, articulated, and specialised in particular ways by different 
cultures. There is a relatively high degree of articulation of the visual 
mode in the 'West', though differentially in particular places: whether 
the specialisations of religious icon, and of religious iconography more 
generally, or the specialisations in particular art movements; or, yet again, 
the specialisations in particular scientific or technological domains in the 
use of diagrams and their components; and so on. Nevertheless it is also 
the case that the visual mode has not been developed into as highly articu 
ated a state as spoken or written language are, for instance, or as they 
had been developed and conventionalised in other cultures - say Egyptian 
hiroglyphics; Chinese pictograms; or Australian Aboriginal visual icon 
ographies. In this section I wish to give one example to counter the notion 
that language is the only fully articulated mode of representation; and one 
example to suggest the idea of the potentials and limitations of modes, and 
of their specialisation. The first is a drawing by a six-year-old girl of an 
elephant; the second some pages from science textbooks of the late 1980s 
and early 1990s, produced in England, for, roughly, fourteen-year-olds.

The drawing (Figure 9.1) is a precise representation of an elephant, 
from a particular point of view. If we attempt to 'translate' what it is into 
either speech or writing, we discover just how specialised this mode is. We 
can say little more than that it is drawn from in front and above the 
elephant at an angle of 45 degrees. But this 'translation' immediately points 
to the limits of 'translation': it gives no sense at all of what it is. This is simply 
not how we would articulate the topic 'elephant' in either speech or in 
writing; it would neither arise in that form nor be dealt with in this way. 
The two modes - language and the visual - simply start from different 
concerns, are embedded in distinct ways of conceptualising, thinking, and 
communicating. 

The drawing of this elephant shows an astonishing degree of conceptual/ 
cognitive grasp, and an astonishing imagination - though perhaps our 
astonishment is a reflection also of the common sense about language 
mentioned earlier; even if this child had invented a narrative in which she, 
Peter-Pan-like, had the ability to fly through the air, and she described how 
she approached an elephant, floating three metres above and in front of its 
head, in that narrative she would be unlikely then to focus her account on 
matters such as what proportion of the elephant's eyes she could see, that 
the tusks were invisible, and that the trunk seemed shortened. Any 
one scientific mode positions us, from the very beginning, in relation to its 

FIGURE 9.1 (Redrawn over a very faint original)

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The point here is to keep sight of the cognitive work performed: the complexity of thinking matters. In all ways, the complexity demanded by the production of a verbal account. It may even be more and greater, given that in a verbal account the elements of the narrative — words, characters, textual structures — are readily 'available' in a quite important sense. This is not to understate the work and the transformative action performed in the making of a narrative, but to emphasize that in the drawing of this elephant there is if anything a greater productive/creative effort needed. In the making of a 'story' the word 'elephant' is to 'hand', as are the adjectives which I might employ for further qualification or to elaborate its description. In the making of a cartoon, there is no equivalent 'stock' of images.

Frequently, even when the cognitive and conceptual achievement of visual representation is acknowledged, it is assumed that it is, nevertheless, a translation from or via language. But there is no pre-existing linguistic account of this elephant's head. What there is, or what there are, are 'intersubjective' links — perhaps elephants from Walt Disney movies or cartoons, or toys. In other words, there exists a mode of representation and of communication in the visual medium, independent of the verbal. The visual functions at one level as an independent and relatively autonomous semiotic mode, in which meanings are transported, made, and remade (this elephant's head is, after all, not identical with a Walt Disney cartoon drawing). This mode does not depend on language for its transmission; language is not the guarantor of the efficacy of working of this mode.

That is the one issue. To develop the point about the functional specialization of the modes I will first examine another drawing, also by a six-year-old, and compare it with written 'stories' of a similar event (Figure 9.2). This drawing was made on the prompting of the teacher after the class had visited the Toy Museum in London's Bethnal Green. The child's spoken account was 'Mouse, turtle, doll, Jack-in-the-box. Me looking at all the toys'. The varied experiences of a morning's visit are not represented as events, in sequence; rather, the child's representation transforms and condenses these experiences into a number of salient elements (the toys which she represents) shown in a particular relationship. They are shown on a shelf, evenly spaced, and arranged in size from small to large, with the drawer shown in front (not 'looking at all the toys', but visually addressing us, the viewers).

Again there can be no doubts about the cognitive/transformative work done here: a whole morning's events are distilled into a representation consisting of two main elements: toys and observer; and the former is shown as a classificatory set — these are the kinds of toys you can see at the Toy Museum.

Here by contrast is a story (which is entirely representative and characteristic): 'On Monday we went to the British Museum. First we went to Goodge Street on the Tube. Then we walked to the museum. I liked the mummy best. Then we went home.'

Here the focus is on events, in a sequence. No doubt the children were as fascinated by the things they saw here as the other child had been. However, the demand for a written story focuses the child's attention towards actions, events, and they are organized through temporal sequence. It is possible to represent classifications in language — salient elements and their relations — as in the story in 'there was a mummy; and there was a mask; and there was a cat, etc.' The 'normal' engagement with the world through speech seems to be that of actions and events in sequence.

Figure 9.3 shows an example from the realm of science textbooks. This page is from a book first published in 1988. The language is about events: relatively simple sentences (one or two clauses), which are about actions — what had been done; what is to be done; what might happen if... The diagrams represent the core information of this bit of the curriculum: what a circuit consists of, and in what relation its components stand to each other.

This is an example of specialization: one representational mode, language, is used for a pedagogic purpose, to direct, remind, organise the
Electronics

Circuits
In your first circuits you made touch switches and signal lights. Modern electronic equipment uses the same basic ideas. But if you look inside a house you will see many wires or printed circuits. The wires and bulbs have been replaced by electronic devices like transistors, diodes and light-emitting diodes.

Transistors and diodes are examples of new radiation. They are made from special crystals like silicon. Transistors work because they only conduct electricity in one direction — they are semi-conductors because they can take in and give out electricity, and they need very little electricity.

An electronic light
You can make electronic circuits with wires like the ones you made before. The difficulty is that the circuits are poor, and sometimes things do not work. It is better to order the components.

Here is a simple circuit to operate a light-emitting diode (LED).

This design shows the mail circuit added to the mains board. The bulb is cheap and can be re-used.

When the person touches something wet, a very small current goes from the battery through the wires and lights up the diode.

Grammar and Multiliterracies: the example of the visual

Implicit in the project of Multiliterracies is not merely the assumption that we communicate through and with a range of quite different modes, but also that each of these modes displays regulations which are akin to—though never the same as—those of spoken or written language. Cultures differ in this respect: some have developed the visual into a fully articulated system of communication—Chinese pictographic writing for instance, or certain forms of Aboriginal representation. Others have developed bodily movement—a in the gesture language of the speech and hearing-impaired.

In each case the meanings of the culture find expression in the relevant mode, or set of modes. In fact, material objects—spoken, signed, written, drawn—all occur in a multiplicity of modes; and this realization has to be given full recognition in a project of Multiliterracies. The deep logic of each of these modes is relational to, or derived from, the materiality of the semiotic mode—sound, and temporality and sequence: visual images, and simultaneity and spatiality; gesture, and temporality, sequence, and (three-dimensional) spatiality; and so on. The syntax of speech (and by a more complex development in the visual form of writing) derives from the logic of sequence, and of its potentials. That is, fineness in time and lateness in a temporal sequence can be developed into a complex arrangement of (grammatical) meanings, such as, 'subject of an action', followed by 'the resultant action', followed by 'the participant affected by the action' and so on.

In the visual semiotics, it is, among other reasons, the logic of the disposition of elements in a given space which leads to 'visual grammar.'
The "other means" include what can be done with markings on a surface (and the resultant effects produced by light). We assume that any grammar, whatever the mode, must serve three communicational demands: to communicate about events and states of affairs in the world; to communicate about the social relations of the participants in a communicational interaction; and to have the ability to form internally coherent entities—messages.

The semiotics of the visual space

What follows is a brief account of how a grammar of the visual might function (for a fuller account see Kress and Van Leeuwen 1996), with which we will conclude the argument. With respect to the task of forming internally coherent and meaningful texts, we are here pointing to a use of the visual space (the page, a part of the ground, a wall, a rockface, a plaque, etc.) such that regular meanings attach to parts of that space. In relation to the "page" in Western alphabetical cultures, with a left-right, top-to-bottom reading direction (and with the history of the visual/aesthetic culture of Western Europe), we posit a left-right, bottom-top distinction, such that four quadrants are formed (Figure 9.4).

To the bottom section of an image we assign the value 'real'; to the top section the value 'ideal'. Each of these may be given particular meanings in certain contexts, for instance 'ideal' may mean distant in time, whether 'of the past' or 'in the future'; 'an ideal form'; 'a wish'; etc. 'Real' may have the specific meanings 'here and now'; 'empirically so'; etc.

The left-right distinction has a different meaning: left, as the starting point (in reading across a line) tends to have meanings such as 'what is taken as given', 'taken for granted', 'assumed to be the case', etc. Right, as the finishing point, tends to have meanings such as 'what is new', 'what is an instance (of the taken for granted)'. In other words, the top-bottom distinction relates to ontological judgements; the left-right distinction to the social status of information.

The specific placement of the horizontal and vertical division between real and ideal, and given, is relative to the interest of the maker of the image (or page). Similarly, what kinds of semiotic materials are placed there is both culturally shaped and determined by the interest of the maker of this structure. What is stable is the meaning of these divisions: material placed in the bottom-left quadrant will be understood to be given and real, etc.

Other distributions of the space are possible and are in use in different cultures—for instance, a distribution of centre versus margin, where what is central has a different valuation to what is marginal. Different cultures have different uses. Within a pluricultural society therefore quite different dispositions may be in use, though some may be dominant in relation to others.

Figure 9.4

The semiotics of states of affairs in the represented world

With respect to the task of communicating about events (and their internal structures), objects, events, and states of affairs, we assume a use of visual elements which both indicates what are treated as major elements, and what the relations between them are. In a diagram, for instance, two elements may be connected by an arrow, so signalling one as the origin, originator, or cause, and the other as recipient, goal, effect. The famous communication model of $S \rightarrow M \rightarrow R$ is such a relation; except that this has three elements. It might be read as: a message $M$ originates with $S$; it passes to $R$, where it comes to rest. Images with realist or figurative elements—for instance, a person passing something to another or a person looking at another—fit easily into this scheme.

At the same time there are images which do not represent (inter)action, but rather represent states of affairs. A picture of an Antarctic explorer in a textbook shows in schematic form what he needs to wear: for hood, heavy mittens, fur-lined coat, boots. This shows visual analysis: 'X has these parts'. Or there may be an image of a scientific instrument objectively represented. Images of this latter kind are quite as common as the former; usually there is some indication of a focal element, but not necessarily so. Pages in science textbooks often have entirely regular arrangements of small images 'in blocks': here the task, and the system, is that of classification.
Design, culture, transformation

Meaning-making, as Gunther Kress has observed, is prospective; it is interest-laden and future-oriented (see Kress, Chapter 7 above). Semiosis involves the representation of interest (a need to communicate); selection from the range of representational resources (drawing from Available Designs, be they, for instance, in various Linguistic, Gestural, Visual, Spatial or Multimodal forms); and representational action or the meaning-making process itself (Designing).

Thus, meaning-making involves Design in both its senses. 'Design' in the sense of morphlogy, that is, structure and function, such as the design that 'is' a motor car or a skeleton, for instance; and design in the sense of an active, willed, human process in which we make and remake the conditions of our existence, that is, what 'designers' do. Design, therefore, refers both to structure and to agency.

Design is a process in which the individual and culture are inseparable. The representational resources available to an individual are the stuff of culture; the ways of making meaning that an individual has learnt and used perennially over the course of their life; as well as those new ways of making meaning that they know are there and that they could pick up with more or less effort if and when they were needed. Others' interests have already been expressed through Designings that have resulted in the Redesigned, and these, in turn, become Available Designs for the individual in their own meaning-making. Culture is no more and no less than the accumulated and continuing expression of agency; of Designing.

These propositions seem obvious and, in a way, a kind of common sense. The notion of Design, however, entails a very different conception of meaning-making from that which traditionally underlies both theories of language and practices of literacy teaching. It also entails a very particular concept of culture.