'Design: the rhetorical work of shaping the semiotic world' Gunther Kress

The chapter offers a distinctive perspective on the world of meaning: namely that of 'design as semiotic work,' which underlies all and every action of making meaning. It assumes that the work of design is ceaseless, changing the world in the course of that work. We start with a world which on the one hand is already fully designed, and which, on the other hand, is constantly re-designed in and by our semiotic actions, in relation to constantly changing social requirements. The designed world of semiotic resources furnishes us with both the material and the immaterial semiotic resources needed to deal with the semiotic demands of the social world day to day. In our actions, in redesign and in the production of designs, we constantly transform both kinds of resources: the material resources – the modes – and the non-material resources, which emerge in the materiality of modes.

1 From convention to design: an autobiographical take

My working life started when I began an apprenticeship, at the age of 14, as a furrier: one of an intake of seven other fourteen-year olds (among them the first female apprentice in that large firm). In the Germany of 1954, an apprenticeship was still conducted much in the traditions of the medieval guild system. No doubt much had changed over the centuries, yet that system was recognizable still in its characteristic features: hierarchies, traditions, values, practices. Furriers made fur garments - coats, jackets, collars, hats - from pelts carefully prepared by another trade (and guild), that of tanners. The seven of us were set on a path that was clearly laid out: we learned about different kinds of pelts; learned how to make different kinds of seams, with needles designed for different purposes and kinds of leather; with thread that matched the colour, texture and strength of the fur. We learned to use the furrier's tools: pliers, canes to fluff up the fur by rhythmic beating; learned to handle the furrier's curiously shaped knife, and to keep it perfectly honed, with a stone and leather strop.

Some months into the first year we were given our first real job. From the store we each collected a bundle of some thirty or forty pelts, and the apprentice workshop's Master gave us a pattern for a coat we were to make. Then we were told to set to. The tanners had sorted the pelts according to their criteria, which factored in their sense of the furriers' requirements: kind, size, texture of the pelt, and colour. And of course, we were handed the pattern for the coat to be made, a pattern used many times over by others in the factory. Much was 'given', established, 'there': the task to make a fur coat; the skills required; the pattern, reflecting the fashion of the day; the bundle of furs – not too valuable given this was our first effort - but real pelts nonetheless. Everything could and would be done according to rules, in line with traditions. Tradition and convention, both strictly observed under the Master's watchful eyes, would guarantee the success of the task.

We made our first garment, with no mishaps. When we had finished it was evident that each coat looked and was different. All of us had experienced that no two pelts in the bundle are alike, so there had been the task of sorting the pelts to fit to our imagined conceptions of what the coat might look like, as well as to fit them to the pattern of the coat-to-be: by texture, colour, length of hair, by other markings — a stripe down the back, or some dots, curls, the best pelts at the front, some patching under the arms, and so on. Our sorting would give each coat a distinctive look: an appearance that the coat was made of many pelts and yet seemed made from one single pelt. Much significant work had already been done; yet some significant work remained for each of us to do. We had had the same experiences in the workshop; yet as it turned out, we each had done this first 'real' piece of work in somewhat different ways, each using somewhat different principles: one, maybe, preferring texture over colour as a sorting principle; another privileging the length of fur over its markings; and so on.

In 1954, success in a task was ascribed to unchallenged, flawless adherence to convention; the differences that were apparent were attributed to 'ability': an inherent, biological category. After all, everyone knew that "real furriers are born, not made". In such a view the semiotic work of design could not become visible. The task of sorting the pelts to produce a 'shading' from light to dark for instance, was 'just' sorting, nothing much more. It had a clear effect, the result of our different conceptions, but that's all it was.

Differences were utilized to produce a 'pleasing effect': difference was transformed into seemingly natural harmony. It was what a good furrier did: doing a good job, quite simply. It was 'what one did'. The word 'design' would not have entered anyone's head. Nowadays the 'pleasing effect' might more often be recognized as the result of 'semiotic work'; and now it is seen more often as the work of *design*.

On passing an examination after three years, an apprentice became a 'journeyman'. Some few aimed to become 'masters' within the guild, a distinction they could achieve via a set of rigorous examinations, culminating in the production of a "masterpiece".

The requirement of the masterpiece pointed to an inherent contradiction: it had to observe - and stay strictly within - tradition; yet it had to exceed those limits in some recognizable manner, by some innovation, by displaying a new degree of excellence. That contradiction had always been there. In earlier periods, 'journeymen' were enjoined, literally, to go on a journey: from one master's workshop to another, from one town in one region to another region. They would become aware of and versed in the differences that existed across the larger community of the guild, from workshop to workshop and from locality to locality. The 'journeyman' was the vector who carried 'knowledge' across the whole community, ensuring constant change that maintained on-going innovation, within a firmly entrenched ideology of continuity and stability. Ideologically, it was a means of asserting stability; practically it ensured constant change.

It is possible to ask: what was seen as 'given'; accepted as convention; what were the rules which needed to be followed; from larger level institutional frameworks to the matter of wearing the prescribed costume of the guild, to the seemingly minute issue of what seam was to be used to join two pelts with these needles and that thread. At the level of society and state as much as of the guild, the assumption was one of stable, hierarchical structures, from the largest to the smallest level. The frames for thinking which were available – whether as academic theory, as religious dogma or as the common-sense of the man and woman in the street – described and explained 'the social' in broadly compatible terms; and, by that, description and explanation supported the existing assumptions and structures of which they were expressions. Yet constantly there was the new, the result of – unspoken, not foregrounded – interplay, tension even, between what was given and what was imagined as possible; or, more straightforwardly, the interplay between what was given and expected, and what was done.

Some years later, working in a small furrier's workshop in Australia - where my parents had emigrated - this tension came to a momentary flashpoint between the older (English) foreman and the now 17 year old (German) furrier. I had been asked by the owner, an Australian woman, to do some repairs on a treasured fur coat brought in by an elderly émigré lady. It was a large, somewhat difficult job. I had just started on this, when the foreman came over and asked what I was doing. Pointing to 'the job', I started "Oh, I thought I would..." to be cut off by a "You're not paid to think!" I made no objection; though even in that instant I thought 'if I'm not paid to think, what am I doing here?' This thought led me, two hours later, at lunchtime, to visit the local evening college to enrol in classes which could lead, eventually, to matriculation. The foreman's response had provided an unsettling challenge.

Of course, by then the experience of emigration had unsettled many other 'givens', sufficiently for me to feel the reprimand as unwarranted. Rather than brushing it aside, quietly ignoring it, as I might have done in the German factory, it provoked me into action.

Reflecting on that now, with my current perspective of *design*, I have two kinds of question. The first is: 'what has led to this change in perspective from *then* to *now*, in society as a whole? Where has that impetus come from?' And the second: 'Is it possible to generalize and make a link from the state of things *then* to a view of design *now*? Are there continuities; and what are the changes?'

There are continuities. But to recognize these requires a prior change in perspective. What makes the focus on design *apt*, now, necessary even? What is gained by adopting it? Especially as so much of the world of my working experience then, was or seemed adequately designed. In fact, the world was so well and so comprehensively designed that it was not surprising that actions were seen, simply, as work competently done, in a world which 'was as it was'. An apprenticeship *then* was an induction into a relatively stable, pre-designed world, treated as the natural

state of things. The worker-to-be stepped onto a path that led them to a full understanding of that bit of the world in which he would come to act, and which would come to be the relevant world for him or her. No more; but also, no less.

In retrospect one can see that some aspects of that world were more 'densely designed' than others. In the less densely designed parts, the workers, though unacknowledged, supplied the design. Making a new coat belonged to the former; with some 'additional' design; much of the repair of the émigré lady's coat belonged to the latter. The point to take from that for me is that the social world is both always designed and yet never fully designed, enough to deal with the next demand. Generally speaking it presents itself as adequately designed: much more so in times which are experienced as stable and far less so in times of instability. The 19th century railways were relatively newly designed: though the history of 'rail' shows much relevant prior design in many different ways and sites: wooden rails for wheeled carts in quarries, in mines, as in many other sites of work; with animal means of locomotion, which persisted well into the mid 20th century.

With any task of design it is essential to ask what parts of 'the world in focus' are already designed, in what ways, and what the re-design or the new design are meant to achieve. It is of course a difficult question to ask at any one moment and in any one situation: 'what has not yet been designed?' The invisible is notoriously hard to see. That points to the essential role of imagination. Examples of new design usually mentioned are objects such as Sony's design of the 'Walkman', in the mid 1980ties. Yet it too had drawn on a whole range of existing designs: the reel-to-reel taperecorder as a technology for storing and reproducing sound had existed from the 1950ties; and, crucially maybe, that technology could be connected with the intensifying social 'trend' to physical and social 'mobility', a 'social design', itself an effect of the large-scale move away from the notion of the 'mass' (as in 'mass communication', e.g.) to 'individuation'. That, in turn, was linked to the complex shift, both social and economic, from the dominance of the state (and its conception of the *citizen*) to the dominance of the market (and its conception of the *consumer*). Citizens were defined by their place and integration in stable socio-economic structures; consumers define themselves through their practices of consumption. The former supported cohesion and integration; the latter leads to fragmentation. Stability has given way to provisionality, everywhere; convention can not function in the absence of social stability.

The move to bring *design* into the centre of semiotic and social attention has had and still has a range of differing yet always connected social sources and features.

2 From convention and competence to design

The profound unsettling, corrosion, fragmenting, of the social structures which characterized the later 19th and most of the 20th century, has led to the shift in perspective from 'just following tradition', from 'doing it the way you ought to do it' according to convention, to seeing all (semiotic) work as evidence of *design*. Predictably, the social forms deriving from that former era populate, still, our

present ideological / mythic common-sense of 'the social'. After all, they had provided reasonably satisfactory accounts and strategies for that long period, and particularly so for the interests of ruling groups of that period. Difficult to answer had been the common catch-cry 'If it ain't broke don't fix it'.

Design draws on existing resources, both in re-design and – if we assume it to exist at all (a question in need of being explored) – in new design, in design *ab initio*. The existing resources for design (and making) are of a material kind, *modes* – the physical 'stuff'; and of a non-material kind, *theory* and its categories – 'abstract' theoretical / cultural stuff. *Modes* are material resources; the material, physical 'stuff' of sound for instance, has been socially shaped into the cultural resource of 'speech'. Modes are material means for making meaning: socially shaped and culturally available. The non-material theoretical resources are cultural / semiotic categories. They 'emerge' in and are 'materialized' through the resources of *mode*.

To give just two examples: many societies have, as a cultural resource, the mode of *furniture*: a mode which enables forms of living and doing. In that mode there are, in each culture, objects for sitting on. The category 'chair' is one such; others might be stool, bench, sofa, mat, etc. Where the category 'chair' exists, it 'emerges' in material form. Crudely speaking, I can sit on a chair, and experience the abstract category in material form; a different experience, physically, emotionally, socially, to sitting on a bench or on a mat. As a second example consider the mode of *speech*. Societies (except for those who are (hearing or) speech impaired) have developed *speech* as a means of communicating in different social circumstances. We might call forms of speech in the different social circumstances 'genres': interview, conversation, discussion, recount, etc. Each of these genres shapes the social environment in a specific way, puts me as participant in a particular position: with social and affective consequences which I can and do 'feel' physically and physiologically as well as emotionally. I tend not to squirm or sweat, for instance, when I am in a 'conversation'; I well might in an 'interview'.

'Genre' is a cultural / semiotic category, a non-material cultural resource: social in its genesis, and with social effects and meanings. It can 'emerge', in material-modal form as writing on a page or a screen; as writing and image, on some surface; as image alone; as action, or object; etc. Both genre-categories - 'chair' and 'conversation' - are existing resources, part of prior social design and ready for use in redesign.

The genre of 'recipe' may serve as a useful example to elaborate this issue. A 'recipe', let's say for a salad, is first and foremost a cultural category. Not all societies have 'salad' as a (genre-) category in their gastronomic culture. In societies where 'salad' is a common means of preparing food, the category *salad* may have quite long histories, with more or less stable genres; distinct from one society to another. I still make salads that my mother made. I also make salads that my mother would not or would barely have recognized as such. The genre — and therefore my sense of 'salad' - derives from the traditions of specific societies and their cultures. My

intended re-design will involve some change, an imagined 'conception', which may consist in not much more than adding a new type of leaf as an element/ingredient to an existing salad; or maybe substituting one or more new elements for those hitherto used.

How this 'conception' has come about is in each case open to hypothesis. In all cases it is bound to be a response to some prompt arising from the social world around me: from a magazine; a meal at a friend's place; something tried in a restaurant. I may feel that an ingredient from some dish seen or tasted might be interesting to add to a dish which is part of my 'repertoire', something I know well. The new dish – is it 'designed' or is it 're-designed'? - is the outcome of ongoing, ceaseless semiosis. It is a transformation based on 'addition' or 'substitution', an event absolutely tied in to continuous social (inter-) actions.

If the result is 'pleasing' I might repeat it; and after several tries make a note of it; at that point I might send an email to someone about it. The transformed genre, a result of an existing design and of a novel addition, or of a substitution, has taken the place of the dish as it formerly was. Whether I treat it as a new or a re-designed recipe, is a matter for me to decide, and maybe some negotiation with others. My children might absolutely insist on having the former version; my friends might be pleased that at last I have something slightly different to offer. To the email I sent about the salad I might, for good measure, add a photo taken on my mobile 'phone'. I have to decide whether I consider that I have re-designed a salad; or maybe I can say "I have designed a new salad": what is new design, and what is re-design is a question to be settled.

Without answering the question 'Have I, by this, changed the 'genre' of this recipe?' I have shown the inherent flexibility and constant dynamism both of the category seen abstractly, and of its material form as genre whether in writing or in other modes — and of course ultimately as product, a material instantiation of a genre, one I can eat. I could move from a re-design in 'inner semiosis' to 'production' of the dish, without the intervening 'materializing' of the genre in writing. For me, the (inner) recollection of my experiment might be sufficient for any future repeat production of the dish. If however I want to share the re-designed (or the new design of the) recipe with others, to disseminate it, via my food blog maybe, I need to give it material semiotic form.

The problem is to think about the design-sequence as 'stages' or 'phases'. As an amateur cook, I have a 'repertoire' of salads, firmly enough in my head to qualify as 'recipes' — they can be spoken or written or more usually performed directly as the making of a dish. There might be some prompt from or in the world, which produces a response, maybe in the form: "yeah, I could try that". I am experienced enough as a cook for that to be distinct enough as an 'inner' conception of sufficient clarity: "yeah, I've got this real sense of 'a different salad'; I can make that", directly as a dish. Or I might write it down, for it to be communicable, or storable. At this stage I have achieved a new design (or re-design); writing it down or doing a series of

images is not going to change it as a 'design': it is making the design storable and communicable. Now it can be 'produced', turned into the product; served and eaten.

The act of giving the design material form, or producing it, makes the re-design available for potential use in others' re-design. All the time, preceding and 'surrounding' all this, is a culture, with all its resources. It in turn is preceded and embedded in a community, as the generative source of semiosis, of genre and of production, with all its practices and traditions: of agriculture and of food production and of gastronomy; of often long histories and traditions.

In so-called traditional societies, 'one' simply 'knew what to do': little or nothing was written down or otherwise 'fixed' in some representation. Knowledge was passed on through participation in practices. My aunt, daughter of a farming family of many generations – she, herself had moved 'away' – had a 'repertoire' of recipes for making twenty-six different types of (franconian) dumplings: most or maybe all of which I was fortunate enough to taste, as a child and much later again as an adult. Behind the variety of recipes – unwritten instructions for action as practices, as embodied genres – stood social life: the life of farmers whose bodies needed carbohydrates when they came home at lunchtime from the heavy work in the fields; and limited material means. 'Culture' provided the resources of turning the basic staples of flour, potatoes, fat, eggs, into the variety of twenty-six different tastes, textures - as dishes making up a local cuisine.

The ideology of the stability of traditions is of course just that. The twenty-six kinds of dumplings each had their specific name. Yet if one ingredient was not available, or available in a lesser quantity than usual, it would be substituted by another, without that change being signaled by a change in name. That is not to say that the consumers of these dumplings, over lunch, did not notice or comment; quite to the contrary: a precise sensitivity reigned absolutely. Rather it is to say that the stability of the name guaranteed continuity at one level and, at the same time, could and did accommodate change.

In these 'new times' - where 'tradition' is just another resource (as 'authenticity') in (re-) design - I am keen to find a name for my 'new' salad. I have no interest in asserting continuity: quite the opposite. I need to assert my individuality, my 'creativity' through my 'invention', my re-design. There are, now, contradictory tendencies. One choice is 'preserving tradition' by producing something 'authentic'. In many places there are now cook-books of previously unrecorded traditions: an attempt, paradoxically, at 'fixing', in a time of instability, that which had always been dynamic. Another choice, more 'mainstream' semiotically and culturally, is to stand out as the designer / innovator / creator of the new.

The genre of 'recipe' may be useful to show the stages of the process of (re-) design. It can show the distinctness (more than the 'discreteness') of phases: of 'inner semiosis' leading to a stable enough inner (re-)design. There may, in parallel, be a phase of 'materializing' the re-designed genre in some semiotic material: in the

mode of writing in the cookbook or as writing plus sequence of images, in the blog; and so on. That is so, irrespective of the existence of an 'inner' representation (with unquestionable precision), an embodied semiotic practice as a form of knowing. There is lastly, drawing on all this, if and when required, the phase of production. In thinking of design-as-semiotic material, it is important to be aware of the variety: as embodied; as inner speech; as notes written to myself or to someone else; as the writing and the images of the blog; and so on.

In stable communities, learning by participation did not require the recording of much of what was designed: much could be left implicit; shared understandings, the basis of tacit or implicit knowledge, could develop. With the increasing disappearance of stability, that is not a possibility. Hence there is a need to 'record' practices, and to make much that could before be taken as understood explicit, by detailed recording. When practices are recorded, it becomes more readily evident when there is re-design; or, in fact, it makes evident that there is constant re-design. Paradoxically, social instability leads to recording because there exists now a need for explicitness. However, once recorded, what was formerly both utterly normal, unremarked and unremarkable, namely constant change, now becomes evident, which may lead to a slowing down.

The written form of a 'recipe', much like the script of the Elizabethan (or indeed, any) play, relies on the (assumed, and implicit) knowledge of the person who will take the script and use it for production. In other words, in the domains concerned here – the social / cultural broadly - design is never more than a partial account; it is never a full description of all that there is to be performed / produced. The 'density' of the description of the design – of what is to be designed - depends on what is or can be assumed to be known by those who will act on the design and turn it into production. In certain sectors of (English) society it is still impolite to make explicit that which is assumed to be known by everyone. Telling someone that they deal in 'the bleeding obvious' is a popular means of expressing disapproval. In a much wider sense, what I am describing here can also explain much of the change from craftbased production to industrialized mass-production. That process is on-going still; with the development of the new industries, whether in electronics, in pharmaceuticals, in bio-sciences, the requirements of explicitness and precision become ever sharper. In other words, there is a question to what extent one can generalize about 'design' or whether one has to stay in the domain of the social human practices.

The larger level social changes in the direction of pronounced tendencies towards diversity and fragmentation, to 'multiplicities' of the social, mean that less and less can be assumed as shared understanding. It is instructive In that respect to read 19th century cookbooks and marvel at (what seems like) their lack of explicitness – or conversely, marvel at just how much could be assumed as known by everyone in that group.

To sum up:

- * (re-) design is preceded by 'inner' semiosis, itself prompted by an engagement in and with the social/semiotic world; leading to an 'inner' 'conception', a relatively stable 'inner design';
- * that 'conception' may remain as an 'inner' representation, or it may be given (outward) material semiotic form and shape.

Whether as 'inner' or as outwardly materialized form (say, as a (written) text), it 'is' a design. If it has been given material semiotic form, it may be in one or more modes: as speech (being told a recipe); as speech accompanied by images or by gestures or all three; as writing; as writing and image; or in a three-dimensional form.

* The design may be acted on and lead to production.

Showing this as a process in time, as a succession of 'stages' or 'phases', with boundaries, is likely to be at least partially misleading: it is one way of showing what is involved, but it is not to be taken as a real-time and 'realistic', precise account of how aspects of a design-process interact. At any one point there may, for example, be recursion, overlapping or the interposing of re-design.

To restate: the outcome of the process of inner semiosis, the 'conception', can be realized in material semiotic form. It then becomes the visible, tactile, design, the 'blueprint' for instance. In that form it can be debated. At this stage, the design is the signifier, the 'carrier' of the signified meaning / 'conception'. When design leads to 'production' – when the blueprint is to become the house, when the design is to be 'produced' – the design is now the signified. The meaning is to be given material form; the product, let's say the house, is now the signifier of the design. We could ask a client "Is this what you imagined the house to be?" She or he might give a range of answers from "no, that's not what I had in mind at all" to "Yes, that really is what I wanted!"

In most every-day cases of design, the middle step of the design sequence — making a 'blueprint' - is omitted, because the roles of designer and producer are united in one individual. Production follows straight on from 'conception'. Examples abound: the squash shot; the snooker player's stroke; the footballer's pass; the artist's drawn line or brush-stroke; a cook making a meal, all belong in this category. And much more commonly, all utterances, of any kind, in any mode or modal ensembles, are the outcome of (re-) design. All social / semiotic action is the outcome of design even without outward materialization as 'blueprint' of some kind, and brings about a transformation: in design; and in what has been produced. Beyond that, each instance — each phase - changes the resources of designer and of producer; and, with that, of the designer's and the producer's identity. Each phase, each instance changes the semiotic and the social world, even if in the minutest way.

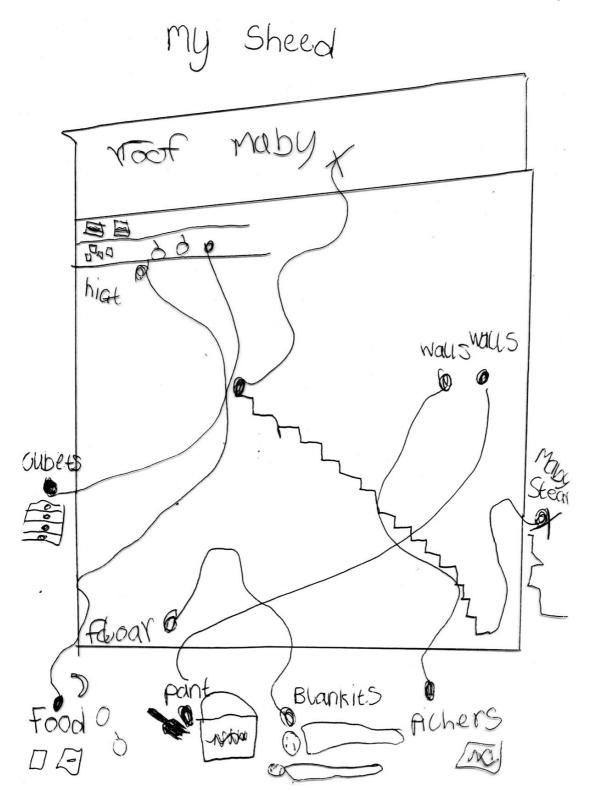


Fig 1 "my sheed" (my shed)

Fig 1, shows the materialization of 'conception' as blueprint: the outcome of the 'inner semiosis' / 'conception' ---> blueprint. The 'conception' rests on or arises out of resources and a particular 'take' by this seven year old on her social world. In her

world there is the past experience of 'playing families', many times: with her friends, constructing "houses", on the floor of a room in her home, with whatever means 'to hand'. At the point of designing this 'house' she was on holidays, with her family, in an old tumble-down farmhouse, slowly being made habitable; etc. Out of this complex of factors comes the 'conception', the design, the complexity of which, with all its affect, is not available in my sparse written listing. The mode of *image* is the central signifier-resource for the outward materialization of the design as blueprint. *Image* carries the greatest functional / informational 'load'; the mode of *writing* is chosen as a subordinate mode, as a means of labelling, a means of 'naming' parts of the design; to indicate specific elements of the design – eg "walls", "floars" - and of contents of the eventually to be produced and completed 'sheed': "cubets" (cupboards), "blankits" (blankets).

One of the problems in thinking about *design* in English, is that the lexeme 'design' can be both verb and noun, one pointing to the process of designing and the other to the result of that process. The latter is evident when we refer to the final product, the outcome of the process – the house, the salad, the utterance, the handbag – as design. The former, as process, can apply to any phase of the sequence of design, from first response to a prompt, to the beginning articulation 'inwardly' of a 'conception', to the materialization of that conception as a visible, tangible 'plan' or 3 D model, as 'blueprint', etc. In the account here, *design* is used in that vague sense. In this case, the design and production of 'the sheed' happened sometime later, during the days following.

Design provides the specifications necessary for production.

The approach of *multimodal social semiotics*, deals with material resources, *modes*, and cultural / theoretical resources. *Modes* are socially shaped material resources, such as speech, gesture, writing, dance, image, movement. They are the outcome of the characteristics of a material (e.g. sound) and of its 'affordances', shaped in the ceaseless social-semiotic work of fitting this material to the 'needs' of specific communities, over long histories of semiotic work. The abstract theoretical/cultural resources provide the means of dealing with essential social meanings, dealing with social action and interaction and its attendant conditions and circumstances. These abstract resources are realized in, 'emerge' in, the materiality of the specific modes used.

The theoretical category of 'genre' for instance, (indicating social relations) 'emerges' in every mode; though in the distinctly different forms of the affordances of a specific mode. So for instance, nearly all 'utterances', whatever the mode, need to deal with time. The mode of *image* has means for realizing 'time', though not as speech or writing do, through the category of 'tense'. 'Power' is a feature of every 'utterance', and every mode needs to offer the means to deal with this: each mode does so differently, according to its affordances: using the possibilities, for instance, of space, size, energy / intensity (loudness, e.g.), proximity or distance, as signifiers of power. Modes are the products of social work and processes, and in these each

mode has been and continues to be shaped to provide the resources needed to deal with that social world. This applies to all the abstract cultural / semiotic features: to cohesion and coherence; to relations between objects / entities in the world; to 'text'. If I want to locate myself in space through the use of *speech*, I can use words such as 'here', 'there', 'coming', 'going'. If I need to do that through *gesture*, I use my hands to point or use gaze to indicate direction; or turn my body so that you will see where my attention is focused; or where I intend to move.

3 Rhetoric, design and 'sites' in times of provisionality

A decision to communicate entails choices: what modes to use and what theoretical, social-semiotic categories will be needed (e.g. genre, spatial orientation, time, etc). There is a further issue for design: a decision about where the 'message' is to appear – its 'site of appearance' – and how it is to be disseminated, that is, what technology of dissemination / distribution to use in doing so. Every 'site of appearance' offers specific potentials; and so does every medium of dissemination. It has to be considered in the overall design of a 'message', and that has always been the case. The emergence of new 'sites' and new technologies newly requires consideration in any design. For instance, choice of modes, choice of genre for a specific purposes and audiences, all have to be coherent with the choice of a 'site of appearance' and a medium of dissemination; the latter have changed access and participation profoundly, with wide-ranging social and cultural implications.

The characteristics of the social media require that they be carefully addressed in the overall design. The sites are (pre-) designed for distinct and specific communicational purposes: for the production and display of identity for instance; or as 'hubs' or nodes for the distribution of information; etc. These 'platforms' are tightly designed and controlled spaces, with affordances that are *social*, *physical*, *semiotic* in their effects. They raise questions such as 'What kinds of things can be done on or with a specific site?' 'What are the (social) characteristics and purposes of those who use these sites?' 'What modes are most suited for this site?' 'What potentials of interaction do they offer?' 'What facilities for establishing the identities of the authors/users?'

At this point the matter of rhetoric emerges sharply, and the reasons for the theoretical, epistemological and political move to a foregrounding of 'design' become apparent. Socially, communicationally and therefore rhetorically, the present is a period of provisionality. The period in which convention provided clearly understood 'grooves' for communication no longer exist; certainly not reliably. Now, every occasion of communication demands that anyone communicating act as rhetor and assesses the characteristics of the environment of communication in close detail: her or his purposes; in relation to the tastes, characteristics and capacities of the imagined audience; the means available for shaping the message; the 'sites' of appearance and what media of dissemination to be chosen; what selections among and combinations of these will best suit the rhetor's purposes; and all these to be attuned to the 'matter to be designed' for communication.

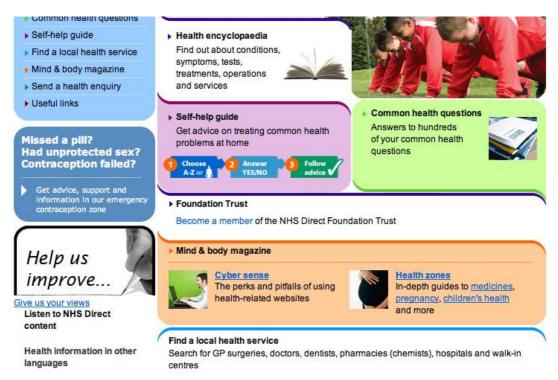
The designer acts on the basis of the rhetor's assessment. An assessment of criterial characteristics of the audience might lead, for instance, to a choice of colour-palette; of modes apt for an age-group or generation or for an audience of this social provenance and cultural habitus. It will suggest preferences for modes and materials for eventual production - image over writing for a text; glass over brick for a building; this genre in preference to these other genres; assumptions about layout of the site of appearance – whether page or screen – as 'traditional' or contemporary; a careful attunement to tastes: the use of writing or image apt for this occasion; and other compositional factors.

With criteria and details established, the designer (usually the same person as the rhetor) can set to shaping the design - as careful selection, arrangement and composition. As a disposition, design goes entirely beyond competence, whether in 'writing' or other (combination of) modes. Resources of different kinds have to be selected and brought into the form of coherence which is seen as apt in relation to purpose (e.g. "I need to communicate to the 'general public', about an urgent issue of public health"), to audience, to means of dissemination, and so on.

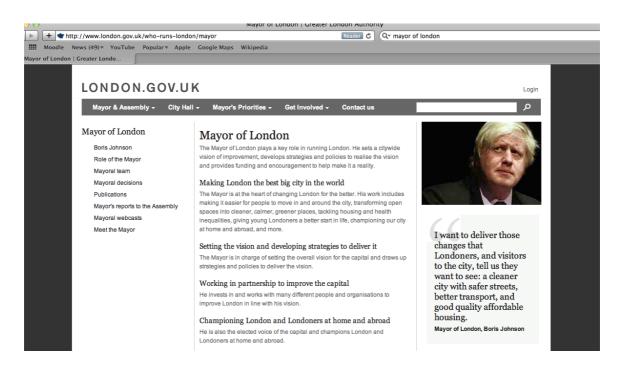
Below are four screen-shots of four institutional websites. Given the kind of institutions represented, availability of resources is not an issue. In each case the platforms offer the same facilities; the audiences differ; the purposes of the audience in coming to the site differ, in ways which need to be factored into the design; the question of what modes are most likely to suit the purposes of the rhetor as much as those of the (assumed) interests of the visitors is to be decided.



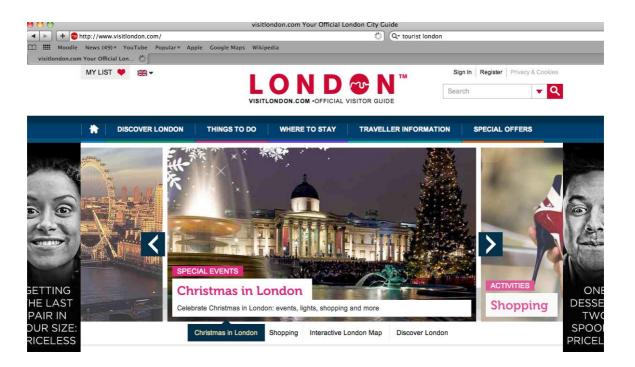
Fig 2a BBC News



2b The (UK) National Health Service



2c Mayor of London



2d London (Visit London.com)

The differences of rhetorical assessment and of the designer's response, are evident here. In the choice of a colour-palette, for instance, there is the exuberance of the London tourism site, and the sobriety of the NHS site. There is the dominance of the mode of writing on the Mayor of London's site, signalling the significance of the office and the seriousness of the political person, contrasting with the near absence of writing on the pleasure-oriented tourism site; and so on. There are differences in forms of layout – the dominance of linearity on the Mayor of London site versus the modularity of the NHS site, or the relative modularity of the BBC site. There are differences in the resources and the forms of coherence established. All these point to semiotic work in rhetorical assessment, leading to specific 'conceptions', which in turn lead to specific designs; and specifications of the designs for production.

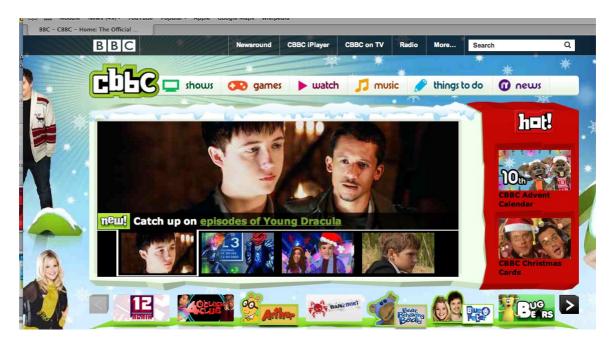
In looking at a website I have access only to the *product* of the design. Any descriptions or analyses about specifications of the design, about initial conceptions or the design process are, necessarily, hypotheses. As someone who lives and pays taxes in London, I assume that the site of the Mayor of London is meant to address me and my interests as a resident. I am advancing a hypothesis about how design happens, how it is 'motivated', how the 'interests' of designers appear in design; and I assume that such a hypothesis can provide a useful tool of some subtlety and precision in the reading of design-as-product.

The designs of sites such as these change with varying frequency; that itself is one indicator of provisionality. The site of the National Health Service is by far the most

stable of the four here, pointing implicitly to an assumed stability of the audience and their interests. This affects not only changes in content, which is understandable enough, but major features of design. My next two examples, 3a and 3b show two sites produced by the same institution, BBC's children's TV, separated by some five years. Several things become clear here: the great instability in the pre-designed world, that is, in the world which is available as a resource for re-design. That instability points in somewhat equal measure both to the social / cultural / semiotic newness of the sites and to the 'insecurity' about the audience, itself a pointer to the social instability which lies behind that: with questions such as 'Who is our audience and what are they like?' 'How should we address children of this age-group?' The two designs show that neither 'conception' nor design can base themselves on conventions, nor on current assessments which are relatively secure, never mind well established. There is an evident nervousness about a lack of a settled sense of the salient characteristics of this audience: reflected in much widespread discussion about contemporary notions of childhood. Such things become apparent, inevitably, in design and production.



3 a cBBC early 2000s;



3b cBBC about 2008

The shift in theoretical perspective from 'convention' and 'competence' to 'design' rests on more than whim. It leaves a requirement to develop a theory which offers a plausible account of the world of meaning and communication *now*. In a *social* semiotic theory, the social is seen as the generative source of meaning, so that changes in the social environment lead to changes in the semiotic landscape. From that perspective, design is both a means of translating social change into semiotic shape and a means of bringing the interests of every member of a social group into the social-semiotic world, through their own work as rhetors and designers.

There are intricately linked reasons which account for that theoretical and practical change. First, there have been and continue to be larger level social changes, and they have consequences in thinking about meaning-making. They have brought profound changes in agency in society. Second, there is an enormous increase in the range of means for making meaning, as well as in the means for participating in meaning-making and of the wide dissemination of these meanings. While these some of these means existed before (to some (smaller) extent), their intensity has increased, as has their potential for impact as they have moved to the centre of the social and communicational landscape. The digitally based media act as a huge multiplier of these trends. It is now quite simply impossible to ignore the variety of materials available for making meaning, as well as the dis- or re-location of other resources: predominantly of writing.

Third, there are effects of a social and small 'p' political character. A changed sense of the agentive potential of individuals – the result of the convergence of several factors – leads to claims for a *recognition* of such agency. In the era of 'competent performance', *design* had seemed to be legitimately ascribable only to individuals in

powerful domains and positions - politicians, artists, scientists and engineers, advertisers, novelists, composers. The facilities of the 'new media' make access to public notice ubiquitously and unremarkably available; and with that comes a legitimate and insistent claim for recognition. Innovation, creativity, 'having a voice', have – for the time being - become democratized.

This 'democratization' is most evident in the expansion of the so-called social media (I write "so-called" as I wonder which media are not social). The ballooning growth in number and size of sites such as Facebook, you tube, Twitter, Pinterest, etc shows a seemingly constantly growing need for opportunities for participation in (public?) communication. Writing is now just one mode among many on most of these sites, and with that, the opportunities for communicating ever expanding areas of one's life via one or more of these sites have expanded massively.

With the social media, the issue of sites and their 'potentials' is foregrounded. A blog offers me potentials for action other than does Facebook; both their affordances differ from those of Twitter. This applies to technical and semiotic potentials — what kinds of texts can be produced on a particular site; what kinds of semiotic choices are easy, which more difficult. And it applies to social potentials: What are the likely characteristics of the audience of this site? What kind of 'social design' is appropriate here: How do I design my identity? How do I design forms of interaction, when the characteristics of the audience are only partially known to me or not at all? It may well be that if I wish to expand my audience I need to use several sites, given that the semiotic and social potentials of each site attract a particular audience.

With each site, 'conceptions' have to be adapted to semiotic and technical possibilities; only then can there be plausible designs; or possible production. This may have been the case before, though it was not evident. 'Then' I might have said 'yes, I write quite a bit'; it is unlikely that I would have mentioned the site and its affordances. The issue of a site's potentials and constraints was not within the horizon of concerns; or, if it was, say with a diary, it was a marginal interest. Now 'site' has moved into the centre of attention: "are you 'on' Facebook?" is an entirely unremarkable question. Every day I have emails from people unknown to me asking to be my 'friend' on Facebook. The social world in which I move has changed, and with it, as a reflection, or as a response, or as a mirror, so has the semiotic world. In designing — or refusing to design — my semiotic world I am designing my social world in a way that was hardly evident before.

In several chapters in this book this is very much the question: in Chapter XX for instance, what tools are available to a designer in the domain of 'drafting'. Chapter YY, focuses on a fundamental theoretical issue: 'How do I make a design (that appears at least as) 'ab initio', in the design of jewellery. Are there instances of design from 'nothing', so to speak? Or is it the case that 'conceptions' are always shaped by a whole range of cultural 'stuff', that makes me look at the leaves of the Monsterio Deliciosa not as 'just leaves' but as already classified in my culture as particularly exotic and enticing?

My last example shows, briefly, design in four dimensions: something playwrights, science teachers, cooks, performers of various kinds or surgeons do; or those whose task it is to educate surgeons and who design simulation suites for that. There are different models of simulation (Bezemer, J., Murtagh, G., Cope, A., Kress, G. and Kneebone, R., 2011; Bezemer, J., G. Kress, A. Cope & R. Kneebone, 2012). A particular model of simulation is an instantiation of a specific conception of surgery: from more technically oriented to more humanistically oriented conceptions. That point is significant in thinking about design, from the most banal to the most significant: ideology is always present, and with it configurations of power.

A simulation does not re-produce every aspect of the actual operating theatre: for one thing, there is no actual patient present, only a simulated (part of a) patient. But more to the point, the pedagogic aims of simulation impose their constraints on what and how something will be simulated.



Fig 4 a The Operating Theatre



Fig 4 b The simulated Operating Theatre

Design is always *for* something, and that 'for' exerts its influence on what will be simulated and how. There is a process of 'selective abstraction' from the actual situation to the (materialization of the conception as) design, on the basis of principles which it is possible to enumerate, explain and defend: certain things are selected because they constitute the core of what will be simulated here. Other things are selected because they lend a requisite degree of verisimilitude to the overall simulation: the simulated 'tic, tic, tic...' of some instrument, capable of having its rate of ticking increased or slowed, to control levels of stress of participants.

Figure 4 a shows a photograph of an actual operating theatre; and 4 b of a simulation of an operating theatre. In both cases an operation is taking place, one real one simulated. We can ask: what has been selected from the actual operating theatre and of the operation taking place, to be recreated in this simulation? It is the question asked by the educator-rhetor, with implications for all aspects of design. We can say, first off, that this has to function as the best possible learning environment: pedagogical efficacy is a primary concern. 4 b simulates an enclosed space; appropriate dress: members of the team are 'gowned' for the task and assembled in appropriate positions around the 'operating table'. There are simulated objects: the emblematic lamp above the operating table; the trolley with instruments; banners simulate furnishings and machinery; etc. Television screens show the actions and movements of the instruments inside the (simulated) patient's body, by 'head surgeon' and 'assistant surgeon'. The simulated operation unfolds in time, according to a (explicitly or implicitly understood) designed script. The 'script' indicates where the scrub nurse's trolley will be placed; where the lead and the assistant surgeon will be positioned; who does what for whom in what kinds of sequence and with what kinds of prompts, etc.

Everything there, and everything that happens, is designed. The overall 'frame' is one of *joint social action in time*; around a task and in a site designed on the basis of what are regarded as essential features of the site. This design is not an attempt at a realistic *copy* of the original site: many of its features are not attended to: they are

not essential to the simulated site. There are actions in the (simulated space of the) theatre and around, which are visible and audible and tangible. What happens inside the (simulated) patient – this is a laparoscopic operation - has been designed in accordance to the demands of the pedagogic design. Some of these actions and their location are well described and some are not. The not so visible as well as the invisible actions are best learned by participation. What has been designed here is the *potential* for encountering and learning about these actions.

Here we have the design of a complex site: of the co-ordination of participants; of actions in time; of talk combined with that action; of gaze and touch; of the synchronized movements by a number of people; of (designed means to affect) stress and stress-levels - the tic tic tic of the various bits of machinery can be speeded up; and so on. Much that is not named but needs to be understood in this environment, in its unfolding as action, exists in the simulation. All follow from the initial rhetorical assessment and description of the environment. The principles for selection are to choose, from the actual operation, those features, elements, objects, movements and sequences, which together will constitute the curriculum and the curricular entities as *designed product*: in such a way that what is to be learned can be encountered most productively and engaged with readily by the learners.

This design encompasses all aspects, from the largest level - the overall design of a complex environment, to an intermediate level, to the smallest level. There is attention to the degree of realism, sufficient to provide both an immediate sense of recognition and yet require 'semiotic work' on the part of participants for them to experience the environment as 'real'. All this draws on the resources of an already densely designed world: yet in the enacted re-design all elements as well as the participants are transformed in crucial ways.

4 Education, learning, assessment

The framework put forward here applies to all instances of communication, to all meaning and to meaning-*making* anywhere. It has relevance, at different levels, to all design. The details, the extent, and the kind of applicability vary; there will be significant differences depending on the domain. There is, in my view, a 'gradient' of relevance and applicability from domains of the social / artistic / human / personal, to domains of the scientific / technological / industrial: and there will be gradients within each larger domain. The model entails a far-reaching political agenda and effects in that it confers *recognition*, *significance* and *value* on all semiotic work. In communication all members of a community are involved in semiotic work. Domains seen as banal are treated with equal seriousness to those which are regarded as highly significant. The 'banal' is as much subject to design, even though differently, as the materials in which ideology more evidently resides. It too is constantly shaped and negotiated.

Semiotic work produces meaning. The approach put forward here provides tools for making meaning apparent, in any design; for the recognition of all work as meaning; and for meaning made in any mode.

Design rests on choice and it is the outcome of choices made. Choice is always political, that is, it is subject to power; it is about (possibilities of) selecting and not-selecting – of rejecting - possibilities. The change in focus from competence (a focus involving authority and convention, itself the sedimentation of power over time) to design (the materialization of the interests of the rhetor/designer) has far-reaching social-political repercussions. It demands that we attend to the semiotic work of all, with equal seriousness, because all are designers. The repercussions reach into the domain of the aesthetic, of education, and of politics, at any level. We can ignore choices that have been made, though now that will be in the realization that it is an act motivated by power, with ethical dimensions and effects.

Education is an instance of communication, so in its domain all these considerations apply: to pedagogy as the design of social relations; to curriculum as the design of that which is to be learned; with a clear sense of the capacities and interests of those who are seen as learners. The perspective of design forces us to think of learning environments in all their complexities, in all and every detail, and in great seriousness; and always in relation to those who will be asked to do semiotic work. If every action is semiotic work, every action and its outcome demands the closest attention. If work produces meaning, we are required to accord recognition to all semiotic work, to the agent of that work, to its principles and purposes.

The insistence on 'recognition' is an absolute consequence of the perspective of design-as-semiotic work: recognition of the worker, of the principles brought to that work, of the materials with and on which work is done. Recognition entails valuation of the 'worker' more than does assessment. The latter is focussed on metrics determined by power; valuation is focussed on a valuation of principled work. While metrics of power focus on the extent to which the demands of power have been met, recognition demands both intense attention and generosity of view: an awareness that principles are the product of social origins and individual socially located work. That in turn demands a generosity of view, in realizing that within one community there may exist distinctly different principles of various kinds: and while these are subject to evaluation, that evaluation needs to rest on enlightened, generous stance toward difference.

Recognition demands an openness; a generosity of values, of valuation. They, as much as assessment within traditional metrics, are matters of interpretation. As such they are instances of re-design; so whether in traditional assessment or in principled valuation we need to ask all the questions about (re-) design. A generous view will necessarily be based on ethical principles; and they demand that we ask questions about choice, design, and their consequences for inclusion and exclusion, for access and lack of access.

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