

2 Even if a bourgeois is unable to give his earthly being permanence, it seems to be a matter of honour with him to preserve the traces of his articles and requisites of daily use in perpetuity. The bourgeoisie cheerfully takes the impression of a host of objects. For slippers and pocket watches, thermometers and egg-cups, cutlery and umbrellas it tries to get covers and cases. It prefers velvet and plush covers which preserve the impression of every touch.

(Benjamin 1997: 46)

- 3 During the 1990s this has become a popular theme of television documentary makers. The classic example is Nicholas Barker's 1994 BBC series *From A to B: Tales of Modern Motoring*, which includes people talking about their cars. Interestingly their talk is often as much of the type of car they drive as of the particular car they drive. It has also become a device for novelists so that telling the life of an object to tell the story of people around it is used by E. Annie Proulx in *Accordion Crimes* (1996) and Tibor Fisher in *The Collector Collector* (1997).
- 4 A 'patina' represents 'the small signs of age that accumulate on the surface of objects' (McCracken 1990:32).

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8

TURN IT ON: OBJECTS THAT MEDIATE ■

'the medium is the message' because it is the medium that shapes and controls the scale and form of human association and action.

(McLuhan 1994 [1964]: 9)

In an important sense all objects are media. A mediating object is one that carries communications between people – information, emotions, ideas and impressions that could have been communicated by speech, gesture, touch or expression – if the people had been with each other. The mediating object carries messages across space or time (or both) between people who are not co-present. All artefacts are treated by human beings as having meaning; we recognize them, understand what their properties are, and treat them as having particular cultural significance. In everyday life we take their meaning for granted when we know what the objects are but we do come across objects that we do not recognize. These are the things that we cannot name, could not use and cannot make sense of; very new things, very old things or things that come from other cultures. These strange things are usually put on display in demonstrations, museums or exhibitions where they are treated as mediators of past, future or distant cultures and their meanings are 'translated', their

messages decoded, by historians, archaeologists, anthropologists and technologists, often through the medium of accompanying texts.

A certain type of object mediates messages that are not directly recognized or translated; complex messages come out of them whenever they are 'turned on' and given attention. These turn-on-able, mediating objects are familiar parts of material culture: books; art works; telephones; record, CD and tape players; televisions; video players and computers. Usually these objects are treated as mere vehicles for media – what is regarded as interesting is the content of the messages. But what I want to do is to attend to the material *form* of mediating objects because it is the form of the objects that affects the way that we interact with them. This was precisely what McLuhan was getting at with his famous slogan 'the medium is the message'; the form of the mediating object, the functional possibilities it incorporates, the way that it commands our *attention* are what determines how it fits into material culture and competes with the messages from other objects and other humans.

Objects that mediate are not generating their own messages, they are mediating messages from other humans removed from the receiver in space and time. All objects mediate, carrying messages about the culture they originate in, but only some carry messages that were *intended* as messages. A cooking pot tells us about the culture it comes from – the technology, the mineral resources, the aesthetics, something of the style of cooking and the size of the group who eat together. None of these messages is intentional in the same way that the communication of a work of art or what is broadcast on television are.

In this chapter I shall discuss art works, ordinary objects and written texts to explore the effects of different material forms of mediating objects on the way that we interact with them and assimilate them into material culture. I shall also look at the form of telephones, televisions and computers – all modern electronic mediating objects that have transformed culture in the way that McLuhan was describing.

ART WORKS

Mediating objects have to command our attention to communicate with us, much as other humans do in face-to-face interaction. When someone speaks it commands our attention through the auditory channel: we have to hear and to listen if we are to understand the messages. Gesture

and expression command attention through the visual channel: we have to watch and notice to be able to make sense of them. The sort of art works I wish to discuss here command attention through the visual channel – paintings, sculpture, installations. They are static and if we are to interact with them we have to look at them; to give them that sort of attention is to 'turn-them-on'. The amount of intensity of attention can be varied from hardly noticing as one walks past the piece, to intense attention that blots out other goings-on in the room.

The art work communicates a sense of humanity or human experience. Any representation – photograph, drawing, sculpture as well as a painting – can give the viewer a sense of displacement, of being there where the person was who made the image, either in a real place or an emotional place or a mixture of both. When it works we say we are 'moved' by what we see; usually this refers to a stirring of our emotions, but there is also the sense of having moved to the perspective of the creator of the art work, of having seen and felt what they saw and felt. There is a sense of co-presence between creator and viewer that gives the viewer the sensation of being both here, now, looking at the image and there, then, looking at what the image represents or evokes. There are clearly a number of codes that operate in this mediating process but with static art works the codes operate on two key levels. One is to do with the representation of the form of the visual world, the other is to do with emotion and the evocation of human presence.

In a short story by Edgar Allan Poe, 'The Oval Portrait' (1986b[1845]), a wounded man becomes spellbound by the 'absolute *life-likeness* of expression' (1986b: 251) in a painting of a woman; he thinks at first that he is looking at a real woman. He later discovers that the woman died at the moment that the artist completed the picture, as if her human essence had been transferred from her living body to the object of the painting. The exchange of life between the image and the real person is a recurrent theme in stories with mythical power.¹ Part of the work of the artist is to mediate through an object form something of life, especially the life lived by humans, such that others looking at the work will recognize it as if they were there.

James Gibson (1979: 272) says that a 'picture' is not a representation of reality but a record in two dimensions of 'invariants of structure', the forms and shapes present to vision. Thought of in this way, the picture does not have to conform to any convention of representation such as perspective to be able to evoke the reality which it records. The 'invariants of structure' refer to the way surfaces interconnect in the

object when it is viewed; surfaces are noticed as more or less distinct, continuous and in relationships to each other. But by treating the picture, whether it is a photograph or a cubist painting, as a record of information that was selected by the artist:

It enables the invariants that have been extracted by an observer – at least, some of them – to be stored, saved, put away and retrieved, or exchanged. Pictures are like writing inasmuch as they can be looked at again and again by the same observer and looked at by many observers.

(Gibson 1979: 274)

Pictures, including art works, store up the investment of human observation and emotion which is then released when the work is viewed. In static works of art the mediation does not alter with the passage of time; when you return to the same painting, it is still available to be viewed in the same way. The object may age, may acquire a patina, but can be restorable such that it can be viewed centuries after it was produced. The cultural context of viewing may change but the material form of the object remains the same. Because the static art object has no other purpose than being viewed, which does not wear its physical form or put it at risk of accident, the chance of the pure art work surviving intact is good. This is very different from the craft work such as the chair which is sat on and so worn, and the glass, pottery and china ware which are vulnerable to damage during use. The message of art works may attract the sort of attention that leads individuals to attack the object, as Marcus Harvey's *Myra* (1995) was during its exhibition at the Royal Academy in London in 1997. In general, the art object is protected from wear and abuse by being put in a gallery, screened with glass, protected with ropes, attendants and 'do not touch' notices. The only form of interaction with it that is allowed is looking at it.

Baudrillard (1981[1972]: 102) identifies two features needed for an object to be offered for sale in modern society as an art object – the signature of the artist and a series of works bearing the same signature, the *œuvre*. The signature is the sign of the creator's claim that this is to be recognized as an art object and that it is his or her particular intentionality behind whatever the object mediates. But for Baudrillard the signature is characteristic of modern culture and the relations between objects within a modern system: traditional cultures organized

around symbolic rather than sign exchange showed much less interest in the 'authorship' of symbolic or mediative objects. In the modern system of art objects, the signature is a key sign of authenticity and provenance. As art objects are valued, both in monetary terms but also in status within collections and exhibitions, the provenance is often more significant than the mediated content.

The signature locates modern art objects in a system that is juxtaposed to the system of everyday objects. Baudrillard points out that modern art playfully elevates everyday objects into art objects by simply signing and exhibiting them (for example, Duchamp's 1914 ready-made *Bottle Rack*: Baudrillard 1997b: 21). Duchamp went further three years later not only by challenging the convention of exhibition as a sign of art, but also by exhibiting a urinal he had signed 'R. Mutt' (*Fountain* 1917); Baudrillard does not refer to the piece but it predates his comments on the role of the artist's signature by some 50 years.

The aura and authenticity of the modern art work does not lie, as it had traditionally for Benjamin (1973[1936]: 215) and Adorno and Horkheimer (1979[1944]: 19), in the singularity of the original image/object, prior to mechanical reproduction. Baudrillard points out that there can be 'an authentic form of simulation' (1997a: 11), that copying has itself been incorporated into modern art; he refers to Warhol as a 'machine' (Baudrillard 1997a: 15) and describes the exact reproduction that Rauschenberg makes of an apparently daubed and hurried canvas (Baudrillard 1981: 106). The capability of the art object to mediate depends on the illusion that it is the product of the intentionality of a particular individual creator. The object's provenance enables it to enter a world of exchange where there is no set pricing and where the value of the object is unpredictable. This distinctive form of exchange, exemplified by the auction, contributes to a fetishization of the object and its value which has nothing to do with its mediative properties (Baudrillard 1981: 118). Mechanical reproduction does not itself damage the status of the art object as a singular mediating object, but there is an 'aesthetic disillusionment' which comes with the failure of the two-dimensional, still picture – the painting or drawing – to continue to evoke the illusion of reality (Baudrillard 1997a: 7–18). In contemporary art the loss of the power of illusion leads to an 'irruption of *objective irony*' in the world of objects (Baudrillard 1997a: 13).

An example of how the art object uses reality not as a representational mode but as a device for irony is a small piece by

Cornelia Parker, *Pornographic Drawings* (1996), that consists of three sheets of paper which have been folded in half onto a small quantity of ink to produce a blot which is mirrored on each half of the paper. Each blot is different, but each evokes images including those of bodies and genitals. The work is dependent for its ironic power on the legend that explains that the ink was made from pornographic film confiscated by Her Majesty's Customs and Excise; without the legend the images would be mere Rorschach test blobs. The illusion of representation has gone, the work of creating the record of the picture has been transformed from the technique of drawing to one used to some effect by nursery school children. As always the art work depends for its status on its place in the gallery and, more than ever on the *textual* work which accompanies it on the wall and in the catalogue.

ART WORKS AND ORDINARY OBJECTS

The context of an art work distinguishes it from other objects; it is precisely because it is exhibited, displayed, framed, protected, catalogued, titled and signed that it becomes a singular object that mediates a certain type of message in the visual channel. But the context of the art work may become confused with that of ordinary objects.

Outside and slightly around the corner from the exhibition *Objects of Desire: The Modern Still Life* at the Hayward Gallery in London in 1997, there was a BMW Z3 Sports car on a show stand in a glass case – BMW (GB) were sponsors of the exhibition. The car was not part of the exhibition which contained paintings and other art objects signed by or attributed to Picasso, Duchamp, Warhol, Oldenburg and many others. In the foyer were two 'Art Cars', models of BMWs painted by Andy Warhol and Roy Lichtenstein. These were clearly making a claim to being art works in that the one-sixth size models were effectively canvases that famous artists had been invited to paint over; they were not working models and though the shape of a BMW was recognizable, these were not vehicles that could be driven away.

The Z3 in the glass case outside was 'real'; not a model or a representation of a car. It was an object that was practical – its design was quite clearly as a car, a form of transport – and yet it made a claim to being an aesthetic object too. Its sleek shape, mint green metallic

paintwork and gleaming brightwork were set on a pedestal, like a sculpture. This was a production model but it had been put in a glass case to be looked at and admired as an exhibit prominently displayed near a major exhibition of 'the still life', a set of unique and singular objects.

Randall Dippert (1993) distinguishes practical objects from art works. What he calls 'ordinary artefacts' are

primarily objects to fulfil our 'practical' goals and purposes: to turn screws, transport us, and so on. The goals concern our 'outer', physical being. Ordinary, practical artifacts have as their highest, well-conceptualized goal the alteration of the physical world.

(Dippert 1993: 107)

Cars which fulfil our outer, physical goals by transporting us are practical objects. Car-like objects such as the BMW Art Cars are sometimes exhibited for display only; they cannot be construed as ordinary objects. But the BMW Z3 was clearly not what Dippert would call an 'art work'. His definition of an 'art work' is expressed in a beautifully impacted negative form which makes us respect the work of philosophers:

An art work is an artifact that is not conceived to have been made with an unsubordinated intention other than one that is such that its recognition implies its fulfilment.

(Dippert 1993: 112)

Art works are those that are created with the intention that they will be recognized as art works: he abbreviates the definition to 'recognition-implies-fulfilment'. The point of Dippert's negative form of definition is that while it specifies both the necessary and sufficient condition for an art work, it allows that some will fulfil a higher intention to communicate. His definition also recognizes that sometimes art works get used as firewood but that they were never intended to have such a practical use. Inside the Hayward exhibition were objects such as Warhol's brilliant but empty *Brillo Boxes* (1964) and Claes Oldenburg's piece of giant but inedible *Floor Cake* (1962). These objects were art works because of the intentions which oriented both maker and viewer to the object. Despite

the form of its exhibition, the BMW Z3 was clearly a car, a practical object and its claim as an art work was parodic; to claim recognition of its aesthetic qualities and so advertise the car.

Objects that are not art works can give rise to an aesthetic pleasure or experience in the human who appreciates it – a sunset, a graceful animal or a sports car. There is an ‘aesthetic attitude’ in which the form, line, colour and so on of an object are appreciated and enjoyed without ignoring the capacity of the object as ‘ordinary’ and its lack of claim to being an art work (Dippert 1993: 112; see also the discussion in Wolff 1983: 73–4). The aesthetic attitude locates the object in a cultural tradition since some valuation is made as to the quality of this object in relation to other objects; this is more beautiful than that. While this works equally well for sunsets, animals and sports cars it is only the sports car that, like the art work, has been designed by human intention to elicit this response. The aesthetic object, both the art work and the car, is produced within an ‘aesthetic dialectic’ (Hauser 1982: 390) in which what has gone before is preserved within the very newest form; this new model of sports car is related to the form of previous sports cars. The aesthetic appeal of an object like a sports car can be in how it mediates the ways in which it might be used, such as how good it would be at accelerating and cornering. The aesthetics are partly what we might call ‘pure’ – the interaction of lines, shape, mass, colours – and partly functional – the relation of mass to wheelbase and track width, the location of the driving position to wheels and engine.²

We can engage with the properties of an object before we use it. Baudrillard (1996: 65) describes the car as an object that epitomizes the mediation of ‘atmosphere’. The aerodynamic shape of the vehicle is not a sign of real speed, but of a sublime speed, the speed of dreams and fantasies, the form signifying the *idea* of function, rather than the actual function. The fascination, the pleasure in looking, evokes the myth of humankind’s technical power over the natural world and becomes a signal of social status (Baudrillard 1996: 65). The design cues of speed – streamlined wings, tail-lights, chrome grills etc. – create a distinctive aesthetic. In trying to grasp the status of the sublime in modernity, Dick Hebdige (1987) describes the place of a maroon Ford Thunderbird in an English neighbourhood car culture of Cortinas and Range Rover replicants (Japanese imitations): ‘the sublime functions as that-which-is-aesthetic-but-not-beautiful’ (Hebdige 1987: 65).

Ordinary objects like cars have a practical function that

art works do not but the ordinary object can have an aesthetic appeal that is not simply to do with beauty; it may lie in its mediation of functional properties or it may lie in a singular quality that transcends form and function – the sublime.

TELEPHONY

Telephones are ordinary, practical objects that do nothing else but mediate by allowing humans to communicate through the auditory channel by talking. They are familiar and although they vary in design, telephones have a form recognizable and usable by anyone who has ever used any telephone.³

The telephone is a little over 100 years old. Invented by Bell in 1876, it became a usable communications device with exchanges and a sufficient number of subscribers within a decade in the USA. By the 1980s 90 per cent of US households had telephones and the rest of the world was fast catching up. In the UK 54.7 per cent of households had telephones in 1976–7 but by 1996–7 this figure had reached 93.1 per cent (Department of Employment (DoE) 1977; Office for National Statistics (ONS) 1997). In that 20-year period there has been a ‘telecommunications revolution’ (Dyson and Humphreys 1990: 2; see also Humphreys and Simpson 1996) driven by technological developments, particularly computerization of switching and terminals, and an explosion in demand from corporate users. Telephony has come to mean much more than the household or office telephone connected to a network of other telephone users. Fax, computer connections, videophones, ansafones, voice-mail and a host of telephone services have changed the traditional meaning of the telephone as a system.

Perhaps the most important change has been the rapid introduction of the mobile telephone, which links the individual, rather than the home or workplace, to the network. By 1996–7, 24 per cent of households in the 30–49 age group had a mobile telephone (ONS 1997: 148), although it no longer becomes meaningful to talk in terms of ‘households’ who have such an individualized item. Some analysts project that there will be over 10 million mobile subscribers in the UK by the millennium, nearly 60 million in the US and 350 million world-wide (*Financial Times* ‘International Telecoms Survey’, 2 October 1995). The materials, shape and the functionality of a particular telephone will

locate it within the material culture of a particular time and place but not usually limit those who can use it. Out of date telephones or those from other countries look different but work in recognizably similar ways. The most recent mobile telephones have switches and screens that require new skills but this has not held back the rapid adoption of the 'mobile' throughout the world.⁴

The telephone mediates between people separate in place but not time; unlike both the ordinary and the art object, the telephone provides a continuous flow of messages once it is 'turned on'. Most telephones are 'turned on' by simply picking up the receiver; in the early days a handle had to be wound, on mobiles a switch is pressed. When the object is turned off it has a 'standing reserve' (Heidegger 1977: 17): the object is not there to be looked at; it is there so that it can be interacted with when it calls for attention by ringing. Like other modern, electronic mediating devices it is small and easily transportable. But unlike televisions, radios or players of recordings, it can be used to communicate either in two directions or in one direction only (in Budapest in 1893 the telephone was used to broadcast daily programmes: Briggs 1990[1988]: 384), it can allow one to one communication or one to multiple communication (recorded messages, conference calls). Leon Kreitzman comments on the effect of the mobile phone in making users available for public communication even when they are in spaces that have until now afforded a certain privacy, especially when in a car, train or aeroplane (Kreitzman 1999: 37). With the mobile switched on, its user is available for private conversation however public the setting, however far from the office desk of business calls or the domestic space of personal calls.

In mediating objects, switching turns on and off its capability as a medium and is part of interaction with objects such as the telephone. The modern telephone has affordances or functions that enable the user to control the mediation – transfer calls, put a call on hold, link instruments for a conference call. Don Norman (1988) comments on the difficulties that arise when switching systems for these functions use a combination or sequence of keys. The problems for the user occur with switching systems that are not 'mapped' (i.e. linked in some direct and physical way to what they do) and do not utilize 'feedback' to keep the user informed about how the system is proceeding. In other words, the affordances of the object are not visible to the user and are not part of an interactive flow with the object. The result is that many users of the telephone system in an organization, cannot remember the sequence

of keys to put a caller on hold while they are transferred, let alone those for more complex functions.

Of central importance to the material impact of the telephone is the *immediacy* of the medium; it requires little or no skill or technical knowledge to use and its mediation is simultaneous. The telephone is, as McLuhan would have it, 'an extension of man':

With the telephone, there occurs the extension of the ear and voice that is a kind of extra sensory perception.
(McLuhan 1994: 265)

Human speech normally communicates through co-presence in the same auditory space and time. That co-presence extends to the visual channel so that speech is supplemented by gestures, facial reactions and so on. Telephonic communication removes the limits of being in hearing range but also removes the visual channel which intensifies the attention to communication.⁵ People doodle but do not effectively visualize during telephone conversations as they do when reading or listening to music or a radio play. Unlike the radio, telephone communication can rarely become background noise.

As well as the visual channel, the ambient noise which is part of physical co-presence is also lost; telephone sound quality is limited, both for tonal range and volume range, so that sound information is restricted to speech and loud background noises. Based on a series of comparative empirical studies, Rutter (1987) sums up the impact of telephone communication as 'cuelessness': it is the loss of visual cues or those from background sounds (such as someone moving in their seat) which makes telephone communication 'depersonalized' in content, 'less spontaneous in style' and favour the 'stronger case' in negotiations (Rutter 1987: 74).

Telephones are relatively simple objects that fit with human beings in a fairly consistent way; their form 'affords' certain types of engagement and not others. The ecological psychologist James Gibson (1979) coins the term 'affordances' to refer to the way that the material of the world fits with human beings:

The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill. The verb to afford is found in the

dictionary, but the noun *affordance* is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment.

(Gibson 1979: 127)

The telephone as an object in the human environment affords something that is turn-on-able and manipulable by most human hands. A bell of some sort to draw attention to the device and in modern telephones a dialling system to initiate connections are also necessary. The principal affordance of the telephone is the handset, which contains something adjacent to the mouth to speak into and something close enough to the ear for hearing the other party. Although the object contains small loudspeakers and microphones, these devices in other pieces of apparatus provide very different affordances. In the telephone they afford intimacy and privacy for speaking.

By using a telephone, two parties are together in real time, can use ordinary speech levels and respond to each other immediately, even though they may be literally any distance apart. The medium allows interruption, murmurs of affirmation, cries of anger or sadness, laughter, variation in volume and tone of voice as well as communication through spoken language. For most social contexts – a business meeting, a family, a party, a gathering of friends – the intrusion into actual co-presence means the talker on the telephone either has to arrange to postpone the call, leave the social setting or disrupt it. The telephone talker is interacting with someone in a different place which excludes those in the same place. If someone in the same room speaks to us when we are on the telephone there is a risk of confusion – the difficulty of being in two places, two separate interactions at once.⁶ Some people like the displacement effect of talking on the telephone as their flow of attention moves from the place they are physically in, to somewhere abstract and a new flow of interaction with the person calling. The telephone call offers an escape from the limitations of the here and now; from the tedium of teenage life in the parental home, from the boredom of standing in a queue or being stuck on a train. As a device used in films to add pace to narrative development, the telephone call puts a character in two places at once, like an intercut, allowing two scenes of the story to develop simultaneously.

The damage to co-present sociability that the telephone threatens can lead to social rules designed to limit its cultural impact. Diane Zimmerman Umble (1992) describes how for the Amish, a religious community in Pennsylvania, telephones are too intrusive to family life to allow them in the home. The need for telephones to do business and to call for assistance in emergencies was solved by having community telephones that are away from the house in 'little buildings that look much like outdoor lavatories' (Zimmerman Umble 1992: 184). The telephones are not listed in the directory, are used mainly for outgoing calls and are shared between six or seven Amish families. The mediating object of the telephone takes up a particular place in this local material culture, channelling it towards business and emergency use and away from personal and intimate use.

In contrast, a study by Jenie Betteridge (1997) of the impact of the telephone on an isolated farming community on an island in the Republic of Ireland showed that the advantages of intimate communication over distance meant that the telephone became firmly established within people's homes. To begin with there was one communal telephone in the post office, which was very important for business purposes as well as keeping in contact with distant relatives. But unlike the Amish community, the inhabitants of Whiddy Island began to install telephones in their own homes and use them to communicate among themselves as well as with those on the mainland, so that it has become 'an integral part of the islander's personal and kinship relationships' (Betteridge 1997: 596). As Betteridge points out, the telephone has a double effect of increasing the amount and frequency of social contact while at the same time reducing the likelihood of face-to-face interaction (Betteridge 1997: 601). This may have reduced the degree of interdependence between islanders but it has greatly increased their contact with wider society, for example by using the telephone to join in phone-in radio programmes.

TEXTS, IMAGES AND SCREENS

Textual objects including books and also letters, labels, lists and so on not only mediate through written language but also take on a distinctive material form which situates them as objects within a culture. Drawing on the writing of Sartre, Benjamin and a number of other sources,

Brenda Danet (1997) describes how books, letters and legal documents can be valued and prized possessions, symbolizing religious, national, familial and personal identity. Their material substance is an integral part of rituals and enactments such as the signing of legal documents. The signed letter or document is a trace of the person whose feelings or actions are attested by the object which can be stored, revered, reviewed and even reinterpreted. The material form of the text is linked to the social relations and interactions with it; lists are acted upon and thrown away, love letters are read and often hidden as a series, the legal document is 'kept safe', often by an agent such as a bank or a lawyer so that it is available for future action.

Computer mediated communication (CMC) dispenses with the material presence of the textual object but Danet comments on the emergence of a new aesthetic, concerned with the look of the text on the screen as opposed to the page: 'some of the aura of texts is being transferred . . . to the computer' (Danet 1997: 27). Colours, sounds, images and a range of typefaces are all cheaply available to those who wish to use CMC and they provide material features of the text object (Danet 1997: 30). However, the disposability of the magnetic form, the difficulty in authenticating origins or provenance, and the dependence on skill, expensive hardware and electricity, limit the power of the computer as a competitor to the written text. Computers have not replaced other forms of textual and image mediation but have provided an additional form – the screen with particular properties.

The screen that we are used to in televisions, video monitors and computers is a flat surface on which the image appears, through the traces of light thrown from behind by a 'modulated scanning beam' (Gibson 1979: 292). The process of display is rapid and continual so the screen can carry images that depict movement as rapid as the eye can perceive. Unlike the projection of film, there is no blurring of each image in a moving sequence of snapshots which the human mind has to accommodate. But the screen image is made up of 'lines' or 'pixels' that are perceptible and do limit the quality of definition of shapes and forms. Fine detail is difficult to see, especially of small objects or objects in the background. If the content of the image is moving – either the object or the camera moves – it is easier to gather visual information on what is there. Unlike the painted canvas, the viewer cannot move closer and further away to improve visual information. Unlike the static object (even one in a glass case) viewers cannot move around it to gain a sense of its mass relative to themselves.

The screen gives a two-dimensional image that shows precise proportions of shape and tones of colour. It can also show movement in real time, both representations of the 'real' (filmed images of 'live', recorded or dramatized human action) and the 'artificial' (cartoons, drawings, graphic designs, text, computer generated images). Gibson (1979: 302) suggests that the moving picture on the screen 'yields something closer to natural visual perception' than the still picture because the human eye developed to register change and transformation; it is unusual for the retinal image to be still in life. The screen can provide an image that is as real as if the screen were a window that looked directly onto the scene that is visible to the camera operator. The screen provides a 'frame', a set of blinkers that limit the direction and field of vision. On the other hand the frame can move, as the camera moves, to show what we could see if we moved our heads either at the neck or by moving the body (Gibson 1979: 297). Progress in the technology of screens suggests that they will become flatter, eventually as flat as the window pane, and that the definition will improve to compete with that of the image drawn, painted, printed or photographed onto paper.

Ruth Levy (1997) describes the emergence of the 'graphical user interface' (GUI) as the visual material form that makes the computer such a distinctive mediating object. She charts the coming together of various technological components to enable the small, personal computer to be usable for design work that led to a GUI in which a pointing device such as a 'mouse' is used to control the computer's operations through icons and menus on the screen that also provide feedback on the instructions. It also led to applications that could draw and represent colours and eventually to the capability to manipulate an image, such as a photograph or a drawing, that had first been 'scanned' into the screen. There was a parallel development of printer technology and the programmes that made the screen image a preview of the printed image. What is remarkable is that these various aspects of what we now take for granted in the most basic home or office computer have been developed since about 1984 when the Apple Mac was launched. The surface of the computer screen is a material *transform* rather than a material form; it is precisely its lack of fixity or continuity that distinguishes it from the art object and the book. The potential for the image on the screen to be changed leads to a way of imaging and viewing the world that Baudrillard calls 'transaesthetics' (Baudrillard 1993b[1990]: 14–19; 1997b: 19–27).

The modern personal computer (PC) makes available to a wide range of people the possibility of producing documents that

include chosen design features (type styles, layout, graphic images, photographed images) that have changed the look of documents, reports and letters as well as party invitations, fanzines, political pamphlets, school newsletters and so on. The screen can display and make endless changes to texts, two-dimensional images and even three-dimensional objects, virtually for free, which has made it an indispensable tool in most work situations. It has also brought into many homes (in the developed countries), screens that are used for the production of images and texts, both on paper and increasingly on the World Wide Web.

TELEVISION

The screen of the cathode ray tube as a source of images is more usually associated with the television. Televisions as objects have moved into a central place within many homes and have perhaps become the mediating object *par excellence* of the late twentieth century because of the amount of attention they apparently draw in those cultures that have television. The television is a source of information, education and entertainment that has not seriously displaced any other form of mediation and yet it dominates many living rooms. In the UK 98.4 per cent of households own one or more televisions (ONS 1997: 150), while 82 per cent own a video recorder and 80 per cent of teenagers have a television in their bedroom (ONS 1998: 218). On average British people watch 24 hours of television per week (ONS 1998: 217). As one of the respondents in a study of the domestic use of technology by Sonia Livingstone remarks: 'The television tends to be on.' (Livingstone 1992: 121). But because it has been turned on, that does not mean that it gets the same sort of attention that the telephone does.

McLuhan calls the telephone a 'cool' medium because of its low definition and meagre information: 'so much has to be filled in by the listener' (McLuhan 1994: 23). Surprisingly he also calls television a 'cool' medium. Rather than the generally accepted idea of the television watcher as a passive absorber of whatever emanates from the box, McLuhan points out that the television can 'tend to be on', watched with a partial attention, while the watcher can at the same time take in the newspaper or a conversation, do the ironing or make the tea. The content of television is different from the theatre or film; the television performance is quiet and intimate, it does not require the actors to project

or command attention, the close-up is routine and casual and the definition is poor. TV is a 'cool' medium which requires viewers to be participants, to engage; if they do not give their attention to what is going on, then the TV screen becomes a part of the furnishings. Film, on the other hand, is a 'hot' medium that commands complete and continuous attention. In the cinema there is nothing else to do but watch the film; if it fails to capture attention then the only thing to do is to leave. The cinema is dark, the viewers slide down in their seats and give themselves up to the film as if to hypnosis. Barthes (1986) confesses that he likes to *leave* a movie theatre and describes the movie-goer coming to, readjusting to the light, regaining his senses (Barthes 1986: 345). In contrast the object of the television set is familiar and lacking fascination. For Barthes, the film on television is tamed; 'the *eroticization* of the place is foreclosed: television *doomed* us to the Family, whose household instrument it has become – what the hearth used to be, flanked by its communal kettle' (Barthes 1986: 346). In the darkness of the cinema the 'dancing cone' of light projects larger than life images on to the screen. But on the television screen, the image is formed as miniature figures which are projected outwards by the light generated inside the box.

Research into the use of television suggests that 'Presence and absence in front of the set cannot simply be equated with attention (or lack of it) to TV' (Morley 1995: 173). David Morley is interested in how the television as an object fits into domestic space and, while also quoting Barthes, suggests that it is *sound* that is the key attention device of the television. To attend to the television one does not have to be sitting in front of it; the information of news and documentaries, the narrative or plot of drama or films, the jokes of comedy, the songs of variety can all, usually, be enjoyed through the sound channel alone. The television can be on without being watched while other tasks, even in another room, are carried on. Morley recalls an informant who regularly 'watched' television from the kitchen while doing domestic tasks and came into the viewing room to see what was going on when the soundtrack told her that something visually important was happening (Morley 1995: 174). He suggests that early in the development of programming in North America, the model of 'radio with pictures' was adopted rather than that of cinema, so that the housewife could do the housework but still be available to advertisers. Williams (1990[1975]: 25) and Spigel (1992: 30) point out that it was the commercial interests of the radio broadcasters which shaped the medium of television as an extension to radio broadcasting.

Morley's view of the importance of sound as a cue to visual attention is confirmed by experimental studies of television watching by psychologists. Anderson and Burns (1991) review the literature on these studies and point out that 'average viewers do not look at television about one third of the time they are in its presence' (1991: 14). They go on to describe how children have been shown to listen when not watching to identify cues to 'comprehensible and interesting content worthy of full attention' (Anderson and Burns 1991: 15). Most empirical research on attention to television has been with children, presumably because of the fears that children will become passive absorbers of whatever is broadcast. In fact children's attention responds to cues such as the type of voice, the music, movement and scene changes and their attention varies with the viewing environment, programme content and comprehensibility. But what is striking is how little attention is actually paid to the television screen. Between 15 and 19 per cent of the time there is no one in the room in which the television is switched on, and even of those present, attention varies considerably according to the time of day, the type of programme and other activities being undertaken (Anderson and Field 1991: 203-4). 'Online' studies using video recording of those watching television suggest that viewer diaries fairly accurately represent the programmes that were 'watched' but overestimate the programmes that were attended to by a 'watcher'. In general, viewing 'sessions' are short; in one study the median length of viewing sessions was 1 minute, although for adult men 58 per cent of all time spent with TV was in sessions longer than 30 minutes (Anderson and Field 1991: 212). What is more, within the session there is a great variation in the length of 'looks' at the screen; 'most look lengths are of relatively brief duration, with extended looks of greater than 1 minute's duration relatively infrequent' (Anderson and Burns 1991: 6). One of the most interesting findings of these studies was the phenomenon of 'attentional inertia', that is that the longer one looks at a television screen, the more one is likely to carry on looking at it (Anderson and Burns 1991: 6). However, these studies treat 'attention' as an empirical phenomenon traced by eye gaze and the apparent lack of 'attention' to other things. What is not clear is how important the contact with the television is to the person watching, how much their watching of the screen is in fact a 'turning off' or at least an attenuation of their attention to other things.

Television can also be used to block out other interactions (rows, questions, demands for information) and can be switched

on merely to give the illusion of co-presence, of someone else being there. Morley argues that the television on in the 'background' provides mainly an aural experience (Morley 1995: 180). But the flickering light, the movement, the play of colours, the presence of figures and other familiar forms are also a soothing co-presence, a sort of moving wallpaper. One of Livingstone's respondents remarks: 'While I work in the living room I usually have the television on without any sound . . . in the background . . . relieving tension' (Livingstone 1992: 121). In my teenage daughter's bedroom it is not unusual to find the television on with the sound turned down, the stereo system playing, while two or three girls chat and dress and also talk to other friends on the telephone. None of these mediating objects has priority over the face-to-face interactions although the telephone seems to command the most direct attention among the objects. All the objects providing their aural and visual information are interacted with in the flow of social action, receiving different levels of attention according to what is going on.

Lynn Spigel argues that the television was seen in the USA as an object around which the family could unite but also as a 'monster that threatened to wreak havoc on the family' (Spigel 1992: 47). One way in which ambivalence towards the television was expressed was by making it into an item of furniture, with doors similar to those of a cupboard that could be shut, hiding the screen. The television was often chosen to fit with surrounding furniture, incorporating the screen not merely in the space but within the ambience of the living room (see Riggins 1994b: 124). As the capability of the television to display images has improved (colour, improved definition, flatter screen) then the outward form of the object has changed towards the 'monitor' style – a plain black or grey box, not exactly square but with no decoration or distinctive style.

Rather than regarding the television as a 'window on the world', linking the private world of the home to the outside world, as early commentators did (Spigel 1992: 102), or as a 'home theatre' in front of which a new set of local, neighbourhood relations would develop (Spigel 1992: 99), the modern television is treated as simply a mediating object for use by those in the household (or bar, or common room).⁷ It is a vehicle for a range of programmes and videos that the user can engage completely with or not even switch on – or somewhere in between. Gone are the veneered wooden casings, doors, knobs and cloth grills; the contemporary television is a bald functional object, on a

wheeled, cantilevered stand with a video recorder on the lower shelf. Gone is the fear of the 'goggle box' which seduces young children into watching it when it is on and which goggles vacantly at everyone in the room when it is off.

No longer is the screen in the house simply a medium of broadcast; there has been a proliferation of screens for television, video and computer use. George Gilder (1994) argues that broadcast television will soon give way to what he dubs the 'teleputer', which will link the television to the computer and produce interactivity between screen watchers. Instead of broadcasting being controlled by an elite of professionals and determined by the 'lowest common denominators of public interest' (Gilder 1994: 56), all teleputers will be able to send information to each other – much as telephones can now. High definition 'field emission displays' will allow the screens to compete not only with television but also with print on paper. Gilder sees the newspaper as the model for gathering, filtering and presenting information on the teleputer rather than the TV broadcast model of a flow of images and information. The modern newspaper offers a 'jigsaw effect' (Williams 1990: 87) of items set out on the page, organized within sections, with headlines and pictures. The viewer can scan quickly what is on offer and then choose the items to read in more detail. With computer based interactivity and the hypertext and multimedia possibilities that go with it, the screen based newspaper becomes a much more complex and sophisticated medium.

As mediating objects develop they will have to be integrated into an existing material culture within the domestic setting alongside other media (see for example Silverstone and Morley 1990; Hirsch 1992). Higher definition means that the 'readability' of the screen image will soon approach that of the printed page; perhaps the writing is on the screen for paper and print, although all previous death knells for the written and printed text have been hopelessly premature.

CONCLUSION

Objects that do nothing else but mediate, like the telephone and the television, are at the centre of modern material culture in a way that cooking pots and weapons were to past cultures. And of course cooking pots and weapons are still items of major importance in material culture.

Mediating objects enable a form of social interaction, whether between individuals or between broadcasting institutions and masses, that includes information about the real world, the fantasy world, the realm of imagination and the field of emotions. Objects that we can 'turn on', extend or stand in for direct, face-to-face social interaction, enabling communication across time and space. Our interaction with mediating objects, which begins with turning them on, is shaped by their particular form which requires a certain type of attention.

I have argued that certain types of objects mediate, carrying intentional and meaningful messages between people who are not within the same communicative space. The static art work mediates across time rather than space, accessible to whoever will visit and look at it. Its status and value is ascribed through formal features such as the signature and the context of exhibition which situate it in the system of objects. The form of the art work can be utilized either to parody modern consumer culture (Warhol's *Brillo Boxes*) or to exploit the aesthetic properties of an ordinary object (BMW's Z3).

The telephone mediates across spatial distance in the auditory channel. Simultaneous interaction through spoken language including tone and expression are communicated even though there is a loss of definition and background sound. The absence of visual and tactile contact alters the form of the communication; the use of the object transforms and constrains interaction. The telephone's remarkable characteristic as a mediating object is its power to interrupt, to demand complete attention at the expense of any other activity. The video display screen requires attention through the visual channel but unlike the art work, the visual object is transitory. As a computer screen, the image requires attention to the changes as the screen is refreshed and information added. As a television screen, cues in the auditory channel enable us to vary our attention to the screen according to interest. The television as an object has become more a screen which displays images and less an item of furniture that carries coded light. The television screen competes for attention with many other different domestic activities. The location of the mediating object, both within the material environment and the social environment of the home affect the way that the object is used.

Mediating objects have proliferated dramatically in both number and form in the everyday lives of late modernity. As we establish practical relationships with mediating objects like telephones and televisions they are simultaneously engaging us in social relationships, in the

exchanging of ideas, values, experiences and emotions. These forms of mediated social exchange are spatially and temporally at a distance from, and in addition to, the flow of direct social interactions and relationships. In this spatial and temporal remove they provide a background sociality that feeds back on the present flow, preparing us for, and enabling us to reflect on, present experience. Our relationships with mediating objects are perhaps the nearest to our relationships with other people. But then there are some things that we become very intimate with, some things which we begin to merge with bodily rather than look at.

NOTES

- 1 In Wilde's even more famous *Picture of Dorian Gray* the exchange is of the human quality of ageing rather than human vitality itself. A similar theme, the exchange of life between people and their mirror images and shadows, is discussed by Baudrillard (1998: 187–90).
- 2 Barthes (1973: 88–90) gives an account of the Citroën DS 19 as a mythological object in which it is aesthetics rather than engineering, form rather than functions which are significant.
- 3 The form is also of course used in art works, most famously Dali's *Lobster Telephone* (1936), but also Joseph Beuys's *Earth Telephone* (1968) in which the shape of the telephone – its mass, the wires coming from it – is mimicked by a piece of earth with straw coming from it. The surface and texture of the manufactured hard black Bakelite telephone contrasts with the messy textured surface of the natural materials in the lump of earth and straw.
- 4 Jonathan Glancey describes the 'cultural revolution' that the mobile phone is bringing to China's Guangdong province:

In noodlebars and restaurants at lunchtime, diners yell into their mobile while holding conversations with those seated around them and eating . . . Business men meet in hotel and office lobbies greeting one another with lengthy handshakes while talking to third parties on their mobiles. A young man and his girlfriend ride along the street on their scooter: she receives a call on her mobile. It's for him. As he darts in and out of the traffic, she holds the mobile to his ear.

(Guardian 5 June 1998)

- 5 In Marguerite Duras's novella *Le Navire Night* (1986 [1979]) a passionate love affair takes place entirely through telephone contact: the lovers never meet or see each other.
- 6 Extensions to the telephone – including hands-free facilities, conference lines and other instruments on the same line – can of course begin to break up the

experience of intimacy and one-to-one co-presence by making the telephonic interaction present to others.

- 7 In contrast to this view, Roger Silverstone (1994) makes a sustained, if ultimately unconvincing, argument that TV is a 'transitional object' that provides a key element in the ontological security of the modern or postmodern world.