

ONE

Technology as Culture

Our tragedy today is a general and a universal physical fear so long sustained by now that we can even bear it. There are no longer problems of the spirit. There is only the question: when will I be blown up? Because of this, the young man or woman writing today has forgotten the problems of the heart in conflict with itself ... His griefs grieve on no universal bones, leaving no scars. He writes not of the heart but of the glands. (William Faulkner 1950)

A common truism of the current day is that technology is accelerating at unprecedented speeds. While many refinements and extensions of communication technology into the personal world are indeed occurring with great rapidity, the truism overlooks the more important observation that the greatest changes in communications took place in the nineteenth century, not the twentieth or twenty-first. In that earlier century and for the first time in human history, the message was commonly separated from a messenger, becoming electronic. The speed of a rider on horseback was superseded. The manufacture of books and papers became inexpensive enough to finally permeate the great masses of people in the industrializing world. Most of the basic forms of narrative, the semiotic conventions of images, and the large social relations formed between mass society and mass media appeared over 100 years ago. Yet, despite their origins in earlier times, the contemporary inflections of technology, especially in media, appear with a ubiquity that is simultaneously familiar and strange. Consequentially, the social and personal effects of mediated communications have become more obvious and more celebrated and also more subtle and threatening.

The pace of change remains a factor, however, in the most immediate and generally noticed transformations of the world from something familiar and having historical depth to a place which appears transient and alien even as it becomes the shared world of contemporary life. The speed of change and the acceleration of technological development are major factors in the destabilization of the local and vernacular world. The most cogent of the philosophers of speed, Paul Virilio (1994), has written at length upon the dissolution of the real into vectors of speed and movement. The real, he notes, is being 'accidented' by the virtual: that is, by the creation of the new, the railroad and the airplane

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create with them the destruction of the old, the derailment and the airplane crash. In just this way, the creation of the virtual world, the electronic world of 'glocalized' presence, destroys the physical presence (Virilio 1997). So, too, the familiar and known disappear into the new products and systems of technology. With a book such as this, for example, the author and reader are guaranteed that specific examples of technology will already be outmoded and superseded before the ink is dried. Books are certainly too slow as a medium to track the changes of communication technologies; monthly magazines barely suffice for the expert. Only electronic communications such as the internet or the television can provide information quickly enough to be even remotely current. As such, the book as a topical source is accidented; it disappears from that position in the social discourses.

This does not mean that the book is finished, though. If reality is too swift, if technology outpaces even science fiction, perhaps the book is more suited to another, more traditional use. The book still excels in its ability to present complex, synthesized ideas and to provide them in a form for contemplation. Such a use changes the subject matter and the focus of the book, but it is a deliberately slow medium of communication and is uniquely suited to this end. Further, the act of reading the book, as opposed to being online, links us back in time to other ways of perceiving the world. It establishes a linkage to the physical and psychical processes of earlier times.

Much of this book is concerned with describing the differences between communication technologies of the present and those of the past. I do not seek merely to document the physical and social forms of these technologies, however. Communication as a human activity has, for most of its history, existed as activities taking place between the minds of people. The book and the paper were dumb and deaf without living voices and minds to give them existence in the shared human world. Only the electronically mediated world can appear to have existence and indeed a life separate from the human. Thus, the relationships between physical communication technologies, the social settings in which they appear, the cultural meanings that people construct around them, and the selves and beliefs of human beings, are integral to understanding this history.

The 9-11 Event

Like many people around the world, I watched the burning buildings at the World Trade Center collapse on television. This event took place in 'real time', that is to say, 'live'. Excluding the insignificant delay of some fractions of a second in transmission between the cameras and my television, I saw the events as they happened. Or did I? What in fact did I witness? Linked into a global network of observers, I participated with others in two activities. First, I observed passively, watching the barely edited stream of images and listening to the commentary of newscasters. Second, I tried to make sense of the emerging

events. In the second task, I was guided by the comments, hypotheses, and statements of the newscasters. How was such an event to be framed either as experience or as meaning?

Regarding the experience of the event, I was struck by the disbelief that people in TV interviews and in real life expressed about what they had seen. This was the immediate state which came from the event, and only after innumerable special reports and mini-documentaries and special newspaper segments has this story been woven into a form. The recurring statement of witnesses was: it was like a movie. Our only experience of this order of event is in movies, and even the coverage on TV of the planes striking the towers quickly employed the editing techniques of film: the slow-motion shot, the multiple angles of the same event, etc. Time was frozen, dissected, rearranged, and presented for us as 'that which happened'. Signifiers of attack and disaster drawn from times long past were invoked and their images commingled with these new ones: 1941, Pearl Harbor, the explosion of the battleship *Arizona* – all this in a year that had seen the release of a new film about Pearl Harbor.

During the 9–11 event, the entire technology of advanced electronic media and the institutions of journalism were fulfilling one of their primary social functions: the creation of memory and meaning in ways that can be taken for granted. Luhman writes that 'memory consists in being able to take certain assumptions about reality as given and known about in every communication, without having to introduce them specially into the communication and justify them' (2000: 65). The World Trade Center attacks, now commonly known and referred to in the US simply as '9–11', had to be written and rewritten into the memory of the media, bound to signifiers from the past, framed as a 'terrorist attack', and so on. What had appeared to everyone watching that morning as the unfolding of more and more strange images, as more and more shocking revelations (other planes, all air traffic grounded), and as apprehension (which is the purpose of this sort of 'spot terrorism'), became meaningful. In so doing, the meaning of the event in the media solidified in several senses.

Obviously the idea of attack would be solidified as the stimulus for an American counter-attack, a plateau of political discourse upon which policy could be constructed. However, the silences of that morning, poignant amongst the incessant chatter, rumors, and misinformation, revealed the incapacity of the media in the face of an event that was ongoing. The unfolding event that flooded initially in unedited and uninterpreted streams throughout the world could not be made to stand still. It resisted the objectification necessary for modern communications, the modern social, and the modern self. The world cannot simply be, it must be some thing. The 9–11 event is what happens when events visibly outstrip the ability of media to position the world as object.

Captured now and held forever as a few moments of digitally encoded patterns of light and sound, the 9–11 event is no longer a part of a historical process of material events driving the perception and understanding of the world. Rather, it has become a moment upon which we can gaze, indeed are compelled to gaze back upon, but it is not the event we see. The media, the government, and the endless entourage of talking heads and experts have

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paralyzed and frozen the meaning. The 9–11 event has ceased to be a part of the present and exists as a past moment understood from the vantage point of the present.

Yet it is the silence amongst the public chatter, the lacunae in speech and discourse, which most eloquently revealed the process of consciousness confronting the emergence of historical reality. This process is precisely what the media subsequently effaced, encapsulating the event forever in a few repeating seconds of image and sound, all safely bundled into the 'ideas', 'opinions', and 'responses' which followed. Instead of seeing the event as one of those moments when events shatter our ability to contain them, we now reflect upon *what it meant*; and for a brief moment, what the world meant was not determined by technological systems because they had not yet framed the events which were so unexpected and inconceivable as to appear truly new.

That the event was symbolic is a banal observation already captured in the compression of thousands of moments into the single word 'event'. Certainly those responsible planned their actions as a kind of theater on the global stage, and the world was already positioned in the drama that Baudrillard called *terrorismo dell'arte* (1990: 45). Newspapers in the US and UK devoted the whole of their front pages to full color photographs of exploding towers. The event was especially shocking and incomprehensible to the West for there was no sense of either the history or the reality of the terrorists in political or popular rhetoric. As Robert Fiske (2001) observed, 'we will be told about "mindless terrorism", the "mindless" bit being essential if we are not to realize how hated America has become in the land of the birth of three great religions'. Despite such attempts to historicize and so make meaningful the 9–11 event, the logic of contemporary politics and representation demanded a causality equally removed from history: terrorism as an abstract politics rather than as a means to an end.

Ensnared in the Western fetish with the fixity of meaning, we find that only shocking events have the power to make us ponder the oblivion so created. From Duchamp's playful ennui, through the manifestos of Marinetti and the Futurists, through numerous artistic attempts to find another way to shock and so awaken the sleeping consciousness, meaning has proven the consistent modernist enemy of aesthetics and perception. But this is not quite accurate. 'Meaning' becomes limiting only to the extent that it minimizes our relationship both to the world and to our historically grounded understanding of being in the world. 'Meaning' becomes limiting if it is construed to be the socially accepted positioning of a subject within some dominant system of signification and the orientation of that position to the exclusion of other possible positions and relationships of signs. Meaning in the modern, capitalist, patriarchal sense is always an exclusion, a terminus of the processes of consciousness writing histories of itself through language.

These processes stop with the assumption of 'meaning' and one particular point of view emerges, one that always faces away both from the event and from the historical project of consciousness. What remains is consciousness gazing at the frozen moment which now stands in place of the world. The 9–11 event now stands in the social domain as an event justifying a 'war on terror'

that can have no end. Once the meaning had coalesced into a form, both the history and the future could be written in terms of this form. Despite numerous unanswered questions, inconsistencies of narrative and chronology, and unexplained improbable events, the 9–11 event has settled into public discourse and discussion in an official form.¹ It means something.

As persons possessing this ‘meaning’, we need neither examine the world circumscribed by this meaning nor extend consciousness into new forms of language to link this meaning to existing beliefs. Rather, the world is already given and its meaning is already bound to the prevailing and dominant beliefs and myths. The outcome of ‘meaning’ severs people from the praxis of their own historical projects and from relationships to others. Kovel notes that ‘a person is correctly seen as a member of a faceless mass because of a lack of concrete relatedness to others in a historical project’ (1981: 223). Paradoxically, the more that people find themselves isolated from meaningful histories, the more appealing become the myths and meanings of the social in an eternal procession of moments in present time. The events in the world, defined for us as ‘the way things are’ and proclaimed by a thousand media heralds, are parroted again and again in everyday interaction, ensuring that even the personal is reinscribed into this overdetermined history.

A Brief History of Objectification

Eric Voegelin (1987) pointed out that noetic philosophy emerges out of a tripartite formula involving consciousness, the world, and language. To change any one of these three components is to alter the others as well. None of these three is independent of the other, and each arises in a particular way from its relationship with the other two. The technologies of communication, especially as these develop as systems, directly transform both our language and what stands for us as the world. In addition to our vision of the immediate world as what stands before us, we have also a shared common world, already replete with meaning, that is not known by us directly. This common world constitutes the shared social of news, of nations, and of the often anonymous powers that affect us in a thousand ways every day. The mediated world has the force of law, government, and social approval. It is ubiquitous and nearly omnipresent. As a consequence, our consciousness is increasingly our awareness of and participation in this created world through languages and symbolic systems that are themselves already structured by technology. Any philosophy of mind or self in the contemporary world must account for this relationship.

The inability to account for all the elements of mind, language, and world is one of the major failings of philosophies and histories that embrace a technological determinist perspective. When McLuhan (1964) wrote of the extension of the human senses and nervous system into the world through the electronic media, he was guilty of the homunculus fallacy, a finally atomistic

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belief that the mind, the self, and consciousness exist as independent and autonomous entities that use media, technology, and language rather than being created through their implication in the same social processes as those which produced technology and media and the forms of language. Even if one accepts McLuhan's words as a kind of trope or metaphor, his idea lacks a verisimilitude with the world necessary to be believable. McLuhan begins with the contemporary perspective that sees language already as a tool. In famously writing 'the medium is the message', he adopts the modern understanding in which 'message' and 'medium' have already replaced 'speech' and 'presence of the other'.

Similar liberal presuppositions influenced the thought and writing of many scholars in their evaluation of the uses of media in such tasks as national development. Daniel Lerner (1958), Wilbur Schramm (1964), and others saw a role for the technology of mass media in extending the virtues of modern society into those areas of the world apparently most in need of industrialization, that is, improvement. It is not enough to say that the theories, and often policies, that developed out of these writers elide questions of power and of the ethics of its use. Rather, their understanding of technology as a kind of amplifier of power together with their understanding of media as a conduit for the transmission of ideas make any possibilities of dialogue superfluous. Framed as essentially linear models of human communication, such formulations do lead us to examine those processes in which consciousness and the self are implicated.

The self becomes aware of itself in the mediated world as a part of it. As this world has moved toward a consolidation of itself in language, in representation, and in its development of ever more self-referential forms, the process of the formation of the self becomes linked to this consolidation. The development of the self, the individuation of consciousness as a sense of itself in the mediated world, shares the same vector as the social itself. The emerging sense of a self-directed, self-aware person takes place within the context of symbolic systems that are increasingly only internally referential. Awareness is not of the world but of the systems of mediated representation. An increase in personal knowledge about the world equates with the extension of mind ever deeper into the mediated systems of representation and meaning. Individual choice and personal freedom thus become based on the ability to discriminate between a limited number of elements presented and represented in the mediated world, whether shampoo or political candidates. Consciousness and desire, as markers of individuation, exist more and more in the already constituted and finished social forms. Notions such as personal freedom emerge from the consolidating system and ultimately refer back to it. As there is no other world that matters, freedom is the freedom to choose from among existing forms.

If we perceive the world primarily through mediated systems of representation, the world becomes largely another aspect of technology, and this changes both consciousness and language. We do not then perceive a world emerging through our engagement with it, a process that Heidegger called *aletheia*, that is, unhiddenness or revealing. For the ancient Greeks, the apparent or seeming reality of the world, *doxa*, was incomplete. The true world, the world as it is, had to be revealed through an engagement with it. We perceive instead a world

whose purpose and meaning are already given. Heidegger notes a shift in meaning with the Latin philosophers: 'The Romans translated this [*aletheia*] with *veritas*. We say "truth" and usually understand it as the correctness of an idea' (1977: 12). The correctness of an idea, of course, has little to do with the notion of *aletheia*. Western societies commonly rely upon either science or religion for answers to questions of truth, but this is only because the responsibility for producing the unhiddenness of the world, for bringing the world into existence in perception and thought, has been largely replaced with a duty to consume information properly combined with the ability to reproduce the currently fashionable truths of the world. The mediated world appears as a world, yet all attempts to produce the *aletheia* or truth of this world finally return to our *doxa*, to the way that our world appears, that is, as various statements that ultimately can be neither legitimated nor dismissed. The contrast between the two meanings is easily seen in the contemporary triumph of opinion over knowledge.

I am not saying that we no longer see the world or that our perception is wholly of television and movies and online entertainment. Certainly the wind blows in my face, the sun warms my skin, the ground resists the press of my foot. All of these things I feel. Yet, what they mean to me, how they feel, how I speak of these to others, are to a large extent already set up for me. I am encouraged to frame my experiences into the shop-worn clichés of a language that drones perpetually through the airwaves and over the broadband connections. The habits of thought and the values and attitudes reflecting my beliefs about the world I encounter develop in ways that privilege the mediated world while denigrating the immediate world. This fact was made stunningly clear to me when a student approached me after a lecture and said, 'What you said last week was true: I saw it on TV.' One could argue that this is only a case of one domain of language, the spoken word, contesting with another, the television, for dominance. However, the 'truth' of my statements was only another assertion like all others until it was integrated into the system of consolidated meaning. I may stand by my words in a literal way, but so what? If I were any good, would I not be on TV? If my words were true in the contemporary sense, that is, in close accord with the popular and official discourses, would not my lectures be supported by the evidence of their constant vindication and elaboration on CNN and *Entertainment Tonight*?

The emergence of perception and history

The basic problems of perception and of being remain perennial regardless of whether the world which stands before consciousness is the polysemic play of infinitely referential discourses or a field of rocks. In describing the difference between the perception and the apprehension of the world as object, Husserl differentiates what he called 'primordial' experience, that is 'becoming aware' or 'perceiving', from apprehension (1962 [1931]: 45–6). The latter emerges when the thing perceived, the *eidos*, is transformed into another kind of experience

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either through memory or through anticipation: 'The other man, and his psychical life, is indeed apprehended as there in person ... but unlike the body, it is not given to our consciousness as primordial' (1962 [1931]: 46). The perception of individual moments and things presents one with a world in which the characteristics of each moment are 'accidental'. The shape, sound, taste, and feel of each moment could as easily be other than it is. The human experience of this is the direct apprehension of the world as one thing and as it is. This need not sound mystical or fantastic, for it is precisely the state spoken of by Zen monks, by martial artists, by marksmen, and by others who require a degree of concentration that silences the self and so effaces the boundaries between self and the world. To achieve such a state from everyday consciousness only requires an act of meditation or concentration acquired through practice. Dewey observed that 'in well-formed, smooth-running functions of any sort ... there is no consciousness of separation of the method of the person and the subject matter' (1985a [1916]: 173). One's distancing from the world through language and thought makes the world abstractly knowable as something separate, but this process simultaneously removes one from participating directly in the historical moment of the world (see Ricoeur 1981: 131ff).

The experience of individual moments of time, being manifested as particular things having particular characteristics and qualities, requires their being linked together in some associational manner. There is an ordering of the world into some contingent universals and relationships (Husserl 1962 [1931]: 47). This ordering manifests itself as empirical knowledge emerging from perception within the complex of being and language. Language, and particularly the more durable forms of it such as writing and printing, are technologies which greatly extend the potential of the idea to fix experience and to locate oneself in relationship to the world and to others. This requires first the positioning of the self in the world and, second, the subsequent projection outward of an idea of the self that is encountered and reflected back upon consciousness (Denzin 1989).

So, how are people in the world; what are the characteristics and what are the processes of their being? It is perhaps indicative of the times that the discussion of being appears in what are arguably the two least read bodies of literature in the Western world, philosophy and poetry. The materialist acceptance of the world as it appears in language is so deeply enshrined in the discourses of power and their internalization as everyday consciousness that a perspective of the world as something *becoming* is extremely difficult to present in simple terms. A study of the conversion of the world into things, already fixed in meaning and experience, formed much of the early work of the poet Rilke, in: his *Ding Gedichte (Thing Poems)*. Only after a lengthy hiatus did he clarify a sense of what had failed for him in the perspective he had inherited from Western culture. What emerged was a perception which is hard to call anything but spiritual. At any rate, that about which Rilke wrote in the *Duino Elegies* emerged from a different order of being, and much of his problem as a poet is to forge a relationship between his own consciousness and the emergence of this other order of existence. In the eighth of the *Duino Elegies*, Rilke (1977: 123–5) describes in detail the experience of directly facing into *alethia*, of confronting

the emergence of being as an ongoing process of experience, and he describes as well its absence or loss in the common experience of reality:

With all eyes the creature sees the open
but our eyes are as though turned around
and placed around them as snares
circles the freedom of departure.

[Mit alle Augen sieht die Kreature
das Offene. Nur unsere Augen sind
wie umgekehrt und ganz um sie gestellt
als Fallen, rings um ihren freien Ausgang.]

He continues, writing of the process of education into the shared perspective of the world as completed which takes place in the early years of life:

Already, with a young child,
we turn him around so that he
sees the state of things backwards, not the openness
that is so deep in the face of an animal.

[Denn schon das frühe Kind
Wenden wir um und zwingens, daß es ruckwärts
Gestaltung sehe, nicht das Offne, das
Im Tiergesicht so tief ist.]

Throughout the poem, Rilke draws out both the primordial experience of the world and the human necessity to lose this experience, to replace it with knowledge and anticipation. His portrayal of the human world is one of spectators incapable of seeing out of the depth of their own being. The consequence of this attitude toward being and toward becoming is the loss of both the world and the self, as Rilke makes clear later in the poem:

It fills us to overflowing. We order it. It falls apart.
We order it again and fall apart ourselves.

[Uns überfullts. Wir ordnens. Es zerfällt.
Wir ordnens wieder und zerfallen selbst.]

Linked finally to our linear progression of sense-making, bound to that which is meaningful, we learn the longing for that which cannot be. Near the end of the poem, he asks the rhetorical question, 'Who has turned us around like this? [Wer hat uns also umgedreht...?]' Rilke does not answer the question, but Eric Voegelin does.

The inextricable relationship between self and the world, mediated through language, arises in the writings of Eric Voegelin as a fundamental paradox of consciousness. He writes that 'consciousness has a structural dimension by which it belongs, not to man [*sic*] in his bodily existence, but to the reality in which man,

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the other partners to the community of being, and the participating relations among them occur' (1987: 16). In other words, language, which constitutes one part of our knowing of the world, is shared. Voegelin refers to this process as 'metaxy' to denote the 'between-status' of consciousness. Consciousness is always a consciousness of some thing or some state, and it emerges and develops within relations with the world which are ordered by language.

Through the mediation of language, experience is already within the domain of the shared, of the human and social; and so consciousness, in holding some analogy of its relation to the world in the present, some model or construct, which for that time is the world, holds it already as a *techne*. Meanwhile, the world flows past, becoming more distant the longer one holds onto the construct. The moments of perception and the ideas that arise through the mediation of language constitute the elaboration of personal histories as well as those we elaborate in deliberate cooperation with other people.

We must remember, though, that our structurings of experience transform how we will understand subsequent experiences. We fit new events into our already existing relationships and analogies. In this sense, Merleau-Ponty (1962: 30) writes that 'history is not only an object in front of us, far from us, beyond our reach, it is also our awakening as subjects'. Our historical use of language positions us toward the world of experience. At the same time, our experience of the now positions us toward the past.

Walter Benjamin reminds us that 'history is the subject of a structure whose site is not homogeneous, empty time, but time filled by the presence of the now [Jetztzeit]' (1969: 261). Each moment constitutes itself and our awareness of it in real, concrete relationships. Thus, without a cognizance of the elaboration of history as a series of interactions between consciousness and the world, we will devise ourselves and our ideas, such as history, from our current subjectivity and time; we will perceive the world from where we are. Each moment constitutes itself and our consciousness of it in real, concrete relationships. Our current subjectivity, our existence in concrete, dialectic relationship with the world, structures our sense of what has come before. It is this thesis which presents his most famous allegory and insight.

A Klee painting named 'Angelus Novus' shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress. (1969: 257–8)

Progress in the Western, additive sense drives the angel of history always away from what has been. The question remains as to the nature of progress; and for

the contemporary Western world, progress is technological elaboration and growth. The world that emerges from such progress and in which we come to consciousness and find ourselves implicated is that technological world.

The Framing of Technology

The language that frames our experience of the world and with which we write our histories has changed dramatically over the last few centuries. Not only have words and meanings altered, but the entire domain of language has altered. Rather than arising out of local, human experience elaborated through conversations with other people, language now comes prepackaged and reflects not the needs of human beings but the values of capital, the machine, and the technological system. To put it simply, our world increasingly consists of words, pictures, and the social frameworks of signification which bind these together as interlocked discourses of meaning. Our consciousness moves not in the world-as-other but through the already constituted experiences of mediated words, sounds, and pictures. It is not that the mediated world is less real, but that the meanings of things within it are already given, and these meanings are what is culturally valuable. Only those things already framed as important within the contemporary social world exist. The mediated world is no less real than the obdurate, local world, but from the standpoint of the former, the latter does not truly exist.

Thus, the values inherent in the language, as well as the proportions between things that appear as the *logos*, have altered. As a consequence more people can identify 25 pop groups than 25 species of tree; more people can name 10 brands of toothpaste than can identify 10 constellations. The problem is that, as Korzybski (1980 [1933]: 58) noted, we tend to confuse the map with the territory. Studying only the map, we lose sight of the world and see only consciousness and language. Our constructs stand between us and the world, not as a simulation of the world, but as substitution for it (Virilio 1994). We have in a sense confused the Platonic mimesis with the world itself. The process of substituting representation for the real strips thought of an ontological grounding in the physical world. This loss of connection with the real brings about numerous consequences, a major one being that the processes by which consciousness encounters the mediated world differ significantly from the processes by which consciousness encounters the obdurate real world. It is not simply that what is important for us to know has changed; our way of knowing has altered as well.

How did we get to living in a 'computerized, mass-media-dominated world where information technologies define what is real' (Denzin 1991: 25)? Perhaps more importantly, how have people changed as a consequence of inhabiting the mass mediated world? Clearly it is not the same as what went before, and neither should we assume that the people who come to consciousness in this new world, whose selves are the products of the implication in this mediated world, are the same as those people who went before. What is different, and

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what remains the same? We must be clear about the processes that relate consciousness, the world, and language in historical and material processes.

Logos

All communication technologies contribute to the objectification of experience. This is in part an extension of their role as the facilitators in the exchanges of language that take place through words, symbols, and pictures, but this objectification is also an intrinsic characteristic of modern technology itself. Right at the beginning we must be cognizant of several related words: *logos*, *techne*, *poiesis*. Each suggests something being made, something created by humans as they struggle with the unfolding of being. While we are accustomed to the word *techne* in many of its forms, we are not so familiar with *poiesis* or *logos*. Technology originally meant something like the field of things that people made, artifacts. Now, however, it has taken on a life of its own. Technology, especially in communications, has undergone an anthropomorphosis: it has become something alive, something almost supernatural. In many contemporary formulations it wants, it develops, it has autonomy. If, for some people, information has become sentient and our world animated, it is because people have lost the distinction between the world and the representational processes in which they are implicated. We have even reached the point where the dream of artificial intelligence seems to some almost within reach.

Similarly, the closest word we have to *logos* is something like knowledge or perhaps logic; but knowledge, now divorced from a relationship to the physical world, has in turn lost some key similarities to *logos*. *Logos*, in many uses, arose out of an engaged perception of the world. Knowledge has undergone a kind of objectification and has been devalued into being a concept, often confused with the concept 'information'. Further, the concept of information has historically grown more and more extrinsic to human perception, becoming more of a thing and less of a process or state of being. The 'accessing' of information may allow one to 'possess' knowledge. To see the current state of knowledge, one need only note the extent to which classrooms have become magic lantern shows with dot point condensations of ideas presented on overhead transparencies, meticulously copied verbatim and regurgitated on tests. Or if one is more technologically sophisticated, the overheads may be supplanted by a multimedia demonstration wherein all subtleties of thought are compressed into gaily lit and easily digestible 'factoids' and multimedia slide shows.

For many centuries, knowledge was considered not as a thing but as a process of engagement with the world. One of the early meanings of *logos* was an accounting or telling of things. The word was also used to indicate a proportionality between things. Heraclitus, in some of the few fragments which remain of his work, explored the issue of proportionality between things in the world as the source of *logos*. One fragment of his writing states: 'Having heard not me, but the logos, it is wise to concur that all is one' (fr. 50, quoted in Hussey 1972: 39). In this

statement, he suggests that the *logos* lies outside himself and his words, but he does not mean *logos* exists as a thing. What, then, is the *logos* for Heraclitus? Hussey suggests that the commonly understood meaning of *logos* as 'meaning' emerges in the first half of the fifth century. The sense in which Heraclitus uses the word is more in keeping with the idea of proportion: Hussey writes that 'his thought is that *logos* expresses a proportion or analogy in the universe and therefore, that the *logos* is reasonable and the law it expresses, in virtue of this proportion' (1972: 41). For Heraclitus, the understanding of the world, that is, the perception and understanding of the proportions and relations between things, derives from the nature of the world itself, though not all persons perceive this. Thus, human thought emerges from analogy with the perceived world.

Proportion exists in the comparative sense, between things in the world. We draw relations between moments of time, events, things that appear before us, and these relations are always contingent upon the sorts of relationships that we ascribe to the world through the use of language. From the appearance of 'nature' to the appearance of self as something thrown ahead of us into the world (Denzin 1989), our relationship to everything that we are not is contingent upon the symbolic orderings and relations which we may impart to or find within the perceived universe. The universe may exist without our perceptions, continuing its obdurate existence independently of our observations (though quantum physics suggests otherwise), but our observations fix our relationship to the universe, narrowing an infinite number of possibilities into a finite number of empirical realities.

Technology vastly limits the number of possible meanings that the world may have by limiting the ways in which the world is brought forth, becoming unhidden. Originally technology was a kind of *poiesis*, a making or performance of an action toward an end that brought about a revealing or bringing forth (Heidegger 1977: 10–11). *Techne* was thus an action toward an end, a relationship which consciousness had with the world through which the world was revealed to consciousness, through which it achieved a state of unhiddenness. This kind of knowledge was linked closely to another which was conveyed with the word *episteme*, and which Plato argued was the absolute certainty derived from the world of forms (see Havelock 1963: 29–30, 34). Modern technology, however, does not function in a poietic way. Modern technology 'challenges' and 'enframes' the world (Heidegger 1977: 14–19). We encounter not the revealing of the world but only the possibilities of transforming it or of using it. Applied to communications, modern technology necessarily displaces the revealing of the world with the characteristics of technology: the world is challenged to mean something, to appear in a particular way, to exist within particular framings, or uses, or gratifications.

Similarly, the structure of society itself was for the Greeks linked to their understanding of the cosmos. As everything social depends upon some consensual ordering of the objects of perception, some structure must be given to the world before it becomes comprehensible as opposed to merely perceived, and it is this process that creates the social. From very early in Greek thought, the ordering of the human social world was linked to the divine ordering of the universe (Meier 1990: 91–2). The world of civilized people could thus instantiate

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some characteristics derived from the divine, notably, *dike* (justice) and *aidos* (reverence for the judgments of others). The *nomoi* (laws or conventions) around which the *polis* was organized were themselves gifts from the gods (see Manville 1990: 49). As such, participation in citizenship was closely linked with moral improvement and with life lived in accordance with the truth of the world understood as divine dictates.

In contrast, the mass mediated world of contemporary telecommunications posits a world based neither on a perceived, primordial experience of the world nor on a philosophically derived understanding. There are implicit orderings in the world, but these come neither from nature nor from the divine, nor from the good and true, but from engineering, system architecture, and marketing. The order that may be found in this world exists not for the moral improvement of the human but for the further extension of the system itself. Thus alternative interpretations, alternative meanings and orderings that might be creatively arrived at as an act of *poiesis*, are actively discouraged. The world is given as immediate in forms already meaningful, and these forms are largely complete in themselves. They exist as modern myths (Barthes 1972 [1958]), and as such they occupy much the same position as those ancient myths that Plato sought to supersede with critical thought.

Technique

The characteristics of the created, mediated world have evolved historically from the cultural practices out of which modern technology emerged. Lewis Mumford (1963 [1934]) blamed much of the enframing character of modern technology on habits and values acquired early in the human experiments with industrial technologies, particularly the mining of coal and iron which built and powered the industrial revolution from the 1760s on. Because mining is most cost-effective in the beginning when the resource is plentiful and easiest to reach, it leads to an attitude of impermanency and 'is the worst possible base for a permanent civilization' (1963 [1934]: 157). He continues, 'the animus of mining affected the entire economic and social organism; this dominant mode of exploitation became the pattern for subordinate forms of industry' (1963 [1934]: 158). From the mines grew the steam engines and railroads which in their applications exemplified the same disregard for both human beings and the environment. The Scotsman Patrick Geddes (1968 [1915]), observed that technologies evolved through stages, and he christened the era of steam and iron 'the paleotechnic', in contrast to the 'neotechnic' age of electricity and alloys which was emerging when he wrote.

We tend to think about technology as an independent force in the world, but the major characteristic of modern technology, as distinct from previous techniques, is the extent to which it binds together as many areas of the social as possible, creating a complex arrangement of social forces which overdetermines action and meaning. Modern technology appears to locate ever larger degrees

of autonomy and control in these forces, diminishing the amount of control held by the individual person. Jacques Ellul (1966: 111) defined this major feature of modern technology as a 'necessary linking together' of different technologies, which produced a kind of autonomous technological system. Ellul (1966: 79–111) noted that modern technologies also exhibit a growing automatism of technical choice, a tendency to self-augmentation, and an autonomy with respect to economies and politics. The conclusion within his analysis is the increasing elimination of everything not technological (1966: 84). Mechanized agribusiness replaces farming; increasingly complex networks of public transport displace walking or cycling. Within such a totality of technology the individual person is trapped. Ellul wrote:

the individual is in a dilemma: either he decides to safeguard his freedom of choice, chooses to use traditional, personal, moral or empirical means, thereby entering into competition with a power against which there is no efficacious defence and before which he must suffer defeat; or he decides to accept technical necessity, in which case he will himself be the victor, but only by submitting irreparably to technical slavery. In effect, he has no freedom of choice. (1966: 84)

The absent freedom of choice which Ellul notes had been the one possibility of freedom from technology in the writings of Mumford and earlier Geddes. In describing a world whose vanishing point is its complete reorganization to the principles of efficiency and mechanical automatism, Ellul (1980: 101) reveals that the individual instances of technology had advanced their hold on the organic, traditional world, becoming now a *technological system*.

Technology is the form that *techne* and power take when a certain level of complexity is reached. It appears to have its own logic, its own autonomy, and its appetite for growth and extension into other areas of life is apparently boundless. Geddes, like Mumford in his earlier writings, did not see the totalitarian structure of technology, in part because it had not elaborated to the degree of complexity or extended itself into the world to the degree that Ellul observed. Now, simple acts of personal, meaningful, that is non-trivial, decision-making in *techne* are seldom possible, for regulation, surveillance and control ensure that the power of the technological system is supreme. For example, in the industrialized nations one can no longer practice medicine as a *techne*, as an art, because of the interlocking controls of state surveillance, licensing, and the institutional needs for uniformity in diagnosis and treatment. Paradoxically, as social control of activities becomes near complete, alternatives arise, as we see in the growing popularity of alternative medicines and therapies, acupuncture, etc., but these too are swiftly regulated and standardized so that any variation from approved practice results in expulsion from the field. For example, chiropractic treatment has only since the 1980s gained a grudging admission to respectable medical practice, and now is a mainstream health profession.

The internet and world wide web were celebrated in their beginnings precisely because they allowed highly complex technological systems to be used individually, as acts of *techne* or art. This apparent freedom quickly became confused

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with issues of privacy, government control of information, surveillance, and individual rights. However, perhaps realizing on some level that, as Winner (1985: 36) wrote, 'the greatest latitude of choice exists the very first time a particular instrument, system, or technique is introduced', some sought to arrest the inevitable development of the system and its solidifying into more efficient and lucrative forms. Manifestos and calls to maintain the free status of the internet are naïve, for the very amount of data and the geometrical growth in the number of sites challenge the social powers, much as radio challenged government and capital half a century earlier. The development of AOL and the early, abortive blueprints for MSN heralded the restructuring of the internet into more orderly cooperative domains that will surely emerge.

Much is already appearing in social discussion about the limiting and controlling effect that the Microsoft Paladin system will introduce through extensive use of certificates in connections and in software. But we need not wait for software to seal the cracks of the internet. Already, e-books, e-zines, and especially advertising with its ubiquitous pop-up and banner ads, are teaching a whole new generation that knowledge, news, and all other social communication, even e-mail, come with ads. Most importantly, those who think the internet sets people or information free miss the point: this 'freedom' only exists within the domains of technology and is creating, at the same time, entirely new ways of thinking, writing, plagiarizing, playing, interacting and reading which are completely suffused with the characteristics and limitations of technology.

The technological lifeworld

Within the technological system people exist in spaces that are already constructed, and they have adapted themselves to this world as simply the way things are. Even nature is manufactured in the forms of parks and green spaces, at best engineered by civil planners to provide a simulation of nature in technology's conception of it: the optimal number of the most desirable trees, the proper amount and kind of grass, etc. In these places 'play' or 'recreation' are allowed to occur. Those activities, which Geddes (1968 [1915]) called 'instruments of vital self-education', increasingly have no place in the city or suburb. Rather, children 'are jealously watched, as potential savages, who on the least symptom of their natural activities of wig-wam building, cave-digging, stream-damming, and so on must instantly be chevied away and are lucky if not handed over to the police' (1968 [1915]: 97).

Urban planning or 'urban renewal' destroys the architectural memory of the city and of the people who lived there. Hillman (1989: 185) quite rightly characterizes this as terrorism and links it to the displacement of a symbolic system that can contain and express the experiences which have traditionally defined the human. Illich notes that in the ancient world the ritual space of the city had to be undone as a social creation, but now 'architects can only condemn it and bury it

under cement. And, as the world is cemented over, dwelling space is extinguished' (1985: 19). Being no longer a social creation but the product of technology, the city is made and unmade through the application of techniques, with no recognition of the human except as people's 'needs' have been quantified.

Just as public spaces are transformed, private spaces, too, are reworked into the form of the technological. The space of the home is made over in new rational ways. Giedion observes that:

the satisfaction and delight that were medieval comfort have their source in the configuration of space. Comfort is the atmosphere with which man surrounds himself and in which he lives. Like the medieval Kingdom of God, it is something that eludes the grasp of hands. Medieval comfort is the comfort of space. (1970 [1948]: 301)

Space, however, cannot be manufactured, it can only be occupied and its containers engineered. The products of design, mass production, and desire recreated the home and the individual spaces within it: hearth became kitchen became food preparation area. Whereas once the place in which meals were prepared was a social, and gendered, center of the house, it has become increasingly the place to locate the machines and 'resources' for food where individual objects of consumption are taken from the freezer to the microwave.

The technological world is a world of constant change but always change in one direction: towards control exercised by the extension of sight and electronic connectedness through space, that is, through action at a distance. This extension is acquired not only through the ever more ubiquitous CCTV cameras, which extend the centralized control of the police for the purpose of providing more 'security'. Rather, every aspect of telecommunications tends to draw one away from the local and concrete and into participation with a social world which cannot be physically present and which is desirable because it is more immediate, more changeable, more ephemeral, and finally more entertaining than the real. The duration of the physical world gives way to the instantaneous transmission of the new. The immediacy of electronics brings what Virilio (1986b; 1997) called the vector of speed into the world and hence accelerated the disappearance of the physical world; what appears on the screen is more real and important than the physical space or inhabited place. He writes that 'teletechnologies of real time are ... killing "present" time by isolating it from its here and now in favor of a commutative elsewhere' (1997: 10–11).

Applied to consumer communications, the technological system outlined by Ellul took two forms. On the one hand, those domains of human communication that could be converted into the new forms were increasingly translated but with changes to their aesthetic form and social function which were derived from the media of technology itself. The social story which might once have been told around a dinner table or the hearth was first syndicated in newspapers, then shown at the nickelodeon, later broadcast on the radio, more recently projected on the television, and now watched as videotape or DVD. As newer technologies of communication emerge, they extend into new niches of human life and so transform them. The presence of a television, video games,

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and a VCR/DVD in an automobile for the amusement of children would have been an excess only a few years ago, but now is becoming common, as is the necessity of having not only a television for each individual in the family but also strategically placed sets throughout the home.

The current wave of communication technologies carries the extension of internet connections into every home, office, shop, and school, which of course guarantees the education of almost every person into using the new systems, allowing the old ways of doing things face-to-face, in libraries, in offices, to be increasingly phased out in the interests of corporate efficiency. Banks can then close branches, government offices can reduce staff and public hours; all questions and concerns can be speedily addressed online. Unless, of course, one has a question which is not locatable among the menus and submenus of the website or which does not appear among the options on the automatic telephone switching system. Then the consumer realizes that it is not that the query is poorly formed or the question wrong, but rather that one's reality simply is not recognized by the system. Rephrase your question into something recognized by the system, or give up in frustration and go away.

The new technologies and media have become an indispensable part of everyday life. The evolution of telephonic communication provides a clear example of how human activity and people themselves are brought within the technological system, and it reveals as well the convergences of technologies taking place with the telephone. The contemporary telephone incorporates digital technologies which are useful not only because of clarity and the reduction in needed bandwidth, but because digitizing the telephone system paves the way for incorporating other digital technologies. Caller ID, voicemail, text messaging, automatic callback: the range of telephonic options not only complicates verbal communication by systematizing it, it also 'modernizes poverty' (see Illich 1973) by essentially requiring more and more money to be spent on systems and features which come to be seen as essential to life. The current 3G or third generation of cellular telephones incorporate digital imaging, internet, and games into the telephone, and tout the coming technologies of real-time music and video over cellular phones – effectively merging radios and television, which were cheap to buy and cheap or free to use, with cellular phones, which require contracts, equipment upgrades, and (with the new features) new subscription services.

The expansion and merger of communication technologies continue the consolidation of the social as a whole. For an example, the new E911 (extended emergency services) now introduced in the US cellular phone system provides the location of the caller's phone, and already some manufacturers are incorporating global positioning system devices into the phone just as they have been incorporated into cars. The idea, of course, is that the phone is there for one's convenience, safety, etc. Here the virtues of technology sneak in: one is always capable of contacting others, but therefore one is always contactable; one need never be alone, for isolation and loneliness are too reminiscent of the alienation and scarcity of meaningful social contact in everyday life for many people. So, one purchases ever more advanced communications to be more efficient, more contactable, more wired into the system.

The characteristics of technology in its contemporary form do not derive solely from technology itself. Rather, the attributes of technology are bound to other social systems of ideology, thought, and representation. For example, the E911 service is useful for locating persons who might be unable to give their location to emergency services, but it also eliminates the invisibility of location which had pleased those seeking privacy and troubled authorities. The OnStar automobile system links cars with the manufacturer, allowing the car to be traced if stolen, opened if accidentally locked, etc., but also allowing insurance companies and intelligence agencies to track individual cars' routes and locations, plot the speed of travel, surreptitiously monitor conversations in the car, and so on. Each piece of technology, together with technology as a system, works with the other beliefs toward creating a unified totality that does not admit for variance.

Technological language

As technology alters the world in which people live, so also it changes their perception, their thoughts, and hence the viability of their previous symbolic orderings of their world. This is not simple technological determinism. Rather, a dialectical relationship exists between the structures of meaning and the concrete expressions of technology. The world that we create becomes the world that we inhabit and upon which our subsequent thoughts and actions are, at least in part, contingent. Changes in the symbolic ordering of the world, although they may occur rapidly, are not instantaneous, and technology outruns the capacity of law, regulation, and other 'brakes' to slow it down. Thus, significant gaps continue to develop between the existing social world and technology. These gaps are quickly bridged by the transfer of technical terms and concepts into the social world, so bringing about an adaptation of the social to the needs of technology. Manfred Stanley refers to the technological ordering of language as technicism, which he defines as:

a state of mind that rests on an act of conceptual misuses, reflected in myriad linguistic ways, of scientific and technological modes of reasoning. This misuse results in the illegitimate extension of scientific and technological reasoning to the point of imperial dominance over all other interpretations of human experience. (1978: 12)

Technology dramatically alters our understanding of the world both by becoming the object of the world and through assimilating language into its goals and values. At the beginning of the electronic age, we have turned to seeing information as something having a being in the world, an essence. However, it would be more precise to say that mediated information stands in place of the world. It is easy to become confused: we believe that we are speaking about the world, but we are speaking about a world which technology has already structured, and this changes the functioning of symbolic language in important ways.

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Ellul observes that 'the technological system is a real universe, which constitutes *itself* as a symbolic system' (1980: 177). Thus, the world is already constituted in regular forms according to the *telos* of the technological system. The world appears to us as already symbolic. There is no real world behind the symbols, only the simulation of a real world, as Baudrillard (1983) has argued. The elaboration of symbolic meanings about the world is replaced with a circulation of signifiers which no longer refer to real world beyond themselves but instead obscure the fact that the real is no longer present in language or in consciousness.

Encompassed within the technological, we will write new stories about the stories; metacommentaries and exegeses will flourish. We will make pictures of pictures. We already do, and the pastiche, parody, and irony inherent in a world already filled with images has been one of the central aesthetic themes of modernist art and aesthetics from the first decades of the twentieth century. Marcel Duchamp, observing an industrial art show, is reported to have said, 'Painting is finished. Who can do any better than this propeller? Can you?'. The displacement of the object of a language, in this case art, changed the practice of art. The only way to escape from technology was to break out of it: 'When railing against the dominance of instrumental reason, the aesthetic consciousness of modernity always admitted its allegiance to "another state of being", i.e., to the explosive break or rupture with the continual inertia of linear social development' (Scherpe 1987: 98).

Technological systems introduce developments from outside a given local society which intrude in such ways as to be uncontainable in meaning; these developments are senseless and no language can contain and bind them meaningfully to the reality of ordinary people. Historically, when new technological systems have appeared, there was initially an attempt to grasp the meaning of the new in time-honored, culture-hallowed symbolic forms which inevitably prove inadequate to the task. The paradoxes raised by the emergence of modern technology proved finally insoluble in any coherent and consistent way. An intolerable tension arises between two symbolic systems, one coming from the rationality of technology, the other from the disorderly domain of human existence and its lengthy history of religious, aesthetic, and philosophical thought. The tension between these two spawns new myths which work to prevent resolution. As the twentieth century began, Henry Adams

proclaimed that in the last synthesis, order and anarchy were one, but that the unity was chaos. As anarchist, conservative and Christian, he had no motive or duty but to attain the end; and, to hasten it, he was bound to accelerate progress; to concentrate energy; to accumulate power; to multiply and intensify forces; to reduce friction, increase velocity and magnify momentum, partly because this was the mechanical law of the universe as science explained it; but partly also in order to get done with the present which artists and some others complained of; and finally – and chiefly – because a rigorous philosophy required it, in order to penetrate the beyond, and satisfy man's destiny by reaching the largest synthesis in its ultimate contradiction. (1961 [1918]: 406)

Adams neatly captured the conflict that a world view of instrumental rationality created for human beings. He explicitly recognized that within the framework of the dominant philosophy of technique, resistance is inherently irrational.

If resistance to the current situation results in defeat or stalemate, another response to the totalizing effect of technology might be another form of escape. This is another aspect of the problem which appeared to von Schlieffen as the *Einkreisung* (encirclement) that he sought to break through, the stasis that the Futurists sought to outrun, the tyranny of meaning that the Dadaists sought to shred and the Surrealists to outflank (see Kern 1983).

With technology, once the inadequacy of traditional, normative language is established, one has no alternative but to chase after technology, seeking to experience through it. We find the technological gaze on the television, the periscope, the microscope, the CAT scan; and increasingly the image defines what we are. Our age 'knows itself from the reflections that flow from the camera's eye' (Denzin 1991: 155). This condition arises because:

language must itself be integrated into the system in order to play its role. Hence, the structuralist studies of language, which are precisely characteristic of that technicization; hence, likewise, the trend toward viewing the text as an entity in itself, an object. And the orientation toward focusing on *how* one says something rather than on *what* one says, in order to demonstrate technologically. (Ellul 1980: 116)

Extreme technicism, that is, the subordination of language to technology, not only appears in representational language but comes to infuse other traditional modes of organizing the world as well. Technique dominates the aesthetics of the popular in every domain. After Warhol the magazine becomes a parody of its own immolation in an exclusive concentration on style, technique, and the immediate. House, trance and techno music reiterate the rhythms of the machine, while the contrary examples of punk, grunge, and so on are, in their beginnings at least, reactions to the constraints of the system and, after that, simply more, commodified, prepackaged forms of expression.

The Social and the Self

Technology has transformed the world and the language with which we understand and symbolically manipulate it. As a consequence, social relations and institutions are changed as well, and the subjectivity of people existing within these relations and positioned by these discourses is similarly altered. Such changes have profound implications for how the social, the individual, and the ethics of engagement between them should be formulated. Partly in reaction to the technologizing of those disciplines such as sociology and psychology and their growing focus on human reality as quantifiable phenomena, other branches of knowledge have split off. Cultural studies, symbolic interactionism,

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social psychology, social anthropology, media studies, and a range of other interpretive approaches to culture have arisen in attempts to explain the technological changes to the social world and to theorize how questions of freedom, gender, race, class, and identity might now be articulated and studied, but few outside the academic world take them very seriously. And in truth, such disciplines are not much use for the main business of contemporary education: vocational education for technical employment.

Still the old cultural institutions stumble on through the new world, translating the mythic ideas and social beliefs of eras into the contemporary articulations of power, but all of the old institutions are in crisis. Schools, universities, churches, law courts, congresses and parliaments, police forces and prisons: all the institutions formed and developed prior to the emergence of the technological system are struggling to reinvent themselves. This recreating of the old forms of power is more than churches erecting websites or lawmakers trying to legislate new policies about intellectual property. Whatever cannot be translated into the new technical rationalistic language will necessarily be marginalized, excluded from serious social notice and comment, and threatened with extinction. Some of the older institutions translate fairly well into the new forms: law enforcement and incarceration industries are perfectly adaptable to the new technologies. Supermax prisons incorporate the latest in automated systems for controlling every aspect of the inmate's life, and in Columbus, Ohio, police used helicopters with FLIR (forward looking infra-red) imaging systems to beam real-time images of rioting students to mobile C3 (command, control, communication) vans which in turn coordinate deployment of ground troops – Desert Storm in domestic miniature. However, other institutions, such as churches, are socially useful to the technological system only to the extent that they can lend moral mythologizing to the contemporary forms of power and so contribute to the orderliness of the social.

The face-to-faceness which formed the basis of 2000 years of thought about the nature of the social, the form and function of the *polis*, and the role of government has been disappearing since the beginnings of the great social migrations of the 1820s, and little has emerged to replace the 'affection and attachment' (see Dewey 1985b [1927]) upon which social life and the subjectivity of the individual were traditionally formed. Although new technologies of communication create communities organized around shared thoughts and feelings, in the end these are communities that can disappear with the flick of a switch, feelings that need never be tested in the world, and thoughts that have no ontological grounding outside mass mediated language. Indeed, people are arguably more isolated, more depressed, and more alienated in direct proportion to the amount of their life that they shift from spending with real people to spending with television, the internet, the radio.

To be plain, the world in which people once elaborated themselves no longer exists. The self that Mead (1962 [1934]), Blumer (1969) and others studied and theorized through the high modernist era was a product of its involvement in ongoing social activities, acts of social symbolizing, exchanges of symbolic recognition. Yet as shown above, the conditions for creating that kind of self

no longer exist. New selves emerge, but these lack the institutional frameworks that would give them stability, the social history that would give them a political praxis, and the grounding in a language that is more than the consumption of self-referential signs. The new selves articulate themselves in part by taking up the languages and rationalities of technology, spawning wholly new possibilities of being in the world while at the same time inscribing their relationships to eternally renewing technologies.

Thus, we find that we coexist between two worlds: the world of lived experience of the real, grounded for a short time longer in the experiences of the body, already proclaimed technologically changed by some (see Haraway 1991); and the world of representation, simulation (Baudrillard 1983), and substitution (Virilio 1994). Yet as the social increasingly becomes representational and is transformed into an aesthetic experience, so the body and the domain of experience are transformed as well. For a while they will continue to function as the 'real' before becoming merely the half remembered mythic experience underlying the new real, obscuring the fact that the realm of the body will no longer exist.

Fixed within the eternal *nunc stans* of the represented world and the social discourses which have been elaborated from it, consciousness has no historical natural past to which it may return. Neither is there an organic body still visible from our perspective; we have only the body without organs. Sex itself disappears into virtuality (Virilio 1997). Caught like flies in amber, we find that a common solution is to quit being flies, to dissolve the self or at least to accept that the self is not the consistent, centered whole which was promised by the popular mythologies. Deleuze and Guattari write that 'no longer are there acts to explain, dreams and phantasies to interpret ... words to make signify; instead, there are colors and sounds, becomings and intensities. There is no longer a Self [*Moi*] that feels, acts and recalls' (1987: 162).

The writer Philip K. Dick developed this theme of the loss of the self in artificial constructs in several fictional works, and of these developments in the world he wrote:

Perhaps, really, what we are seeing is a gradual merging of the general nature of human activity and function into the activity and function of what we humans have built and surround[ed] ourselves with ... But now we find ourselves immersed in a world of our own making so intricate, so mysterious, that as Stanislaw Lem the eminent Polish science fiction writer theorizes, the time may come when, for example, a man may have to be restrained from attempting to rape a sewing machine. (1995: 184)

In Dick's account, everything from the contemporary world is present: substitution, desire, mechanization. The fictional account of a man trying to rape a sewing machine is not substantively different from a man having sex with an image on the computer screen. The screen, the image, and the desire emerge together into the mediated world. The implications of this confusion are explored in more detail through the following chapters, but I should note here

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that unless we recognize the role of technology in transforming both the means of seeing and the world that is seen, we risk an endless confusion of means and ends.

If our interactions with the world are no longer straightforward, neither are our relationships with other people or even with ourselves. Technology, and particularly the technologies of communication, has so mediated and transformed both our subjectivity and the objects of our perception that some writers, such as Haraway (1991), have argued that a new metaphor is required to replace the now obsolete metaphor of humanity: the cyborg, a half-human, half-machine entity. 'Cyborgs are post-organic creatures in our unchosen "high-technological" guise as information systems, texts, and ergonomically controlled labouring, desiring, and reproducing systems' (1991: 1). Cyborgs arise in relationship to a similarly technological world. Haraway continues: 'The second essential ingredient in cyborgs is machines in their guise, also, as communications system, texts, and self-acting, ergonomically designed apparatuses' (1991: 1). Only such a creature could inhabit the new world which is itself machine masquerading as nature, and for Haraway, only such a creature has the potential to create new freedoms out of the patriarchal, militaristic, dominating oppressions of the social.

Numerous analysts have discussed in detail the fragmentation of the social sphere and of the narratives and selves of people within it (for example, Denzin 1991: 24–8; Haraway 1991; Turner 1990: 71–7). The failure of dominant discourses within the social to be able to define the world with the power that they once had creates absences that are filled with new processes. Whereas people previously were positioned by the discursive formations primarily located within institutions that could define social reality, now the responsibility for positioning the self in discourse is shifting increasingly to the individual. Gilles Deleuze (1992) writes of the 'corporatism' which has come to augment the governmentality and confinements documented in the writings of Michel Foucault. The contemporary self is fragmented in part through the multiple processes in which the self can come into being, the multiple domains into which consciousness can project itself in language and representation. As I shall show later, this multiplicity of selves creates real conflicts in people's lives. Selves created within the representational realities of electronic media, for example, may have fundamentally different values and beliefs from selves elaborated in the company of other people.

Yet other strategies exist for living within and perhaps resisting the technologizing of the world, the social and the self. New communities are theorized and constituted in the physical world as well as online (Rheingold 1993). New personal strategies continue to emerge in resistance to the commodification of language and the social (for example, Fiske 1989). Still, the compelling theoretical problems facing any study of communication technologies remain the extent to which virtuality and the other epiphenomena of technology constitute a new social domain, as opposed to merely an extension of old epistemologies (Levy 1998), and the extent to which these significantly alter the world of personal experience, power, and social action.

We define ourselves in the systems of aesthetics, fashion, wealth, desire, and sex as these are structured for us in advertising, entertainment, and mass production. Certainly, people have the ability to make choices from within these systems; we are not 'cultural dupes' or powerless automatons (see Denzin 1992). While there may be numerous ways in which people transform, resist, and create local cultures out of elements of modern, capitalist, global commodity production, the limits of these choices, the parameters within which they may be made, are well policed by both the people around us and the various institutions responsible for maintaining order and 'normalcy', such as law enforcement, psychology and psychiatry, and education. We may choose what we like from the range of commodified desires, meanings, and identities, but the limits of permissible freedom are defined in consumption of commodities (Baudrillard 1981; 1990). Real choice is limited by what is already approved and permitted; the modern self is largely *prêt-à-porter* and what we perceive as choice is little more than accessorizing the wardrobe or wearing it in unusual ways. The contemporary self is manufactured; the advertising of it is our education into the social and into public languages; and the purchasing of it drives the economies of late capitalism.