

# Technological Forms of Life

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## Forms of Life

**W**E THINK so naturally in terms of the notion of 'forms of life', that it is difficult to obtain any distance on the notion. Ludwig Wittgenstein made the concept of 'forms of life' rather common currency across a range of scholarly disciplines. Indeed, in academic talk and everyday talk we speak incessantly of life and forms of life. We speak of '*life*-sciences', psychologists look at the '*life*-course'; we organize our identities in terms of '*life*-narratives'. We 'lead' our lives. Political philosophers speak of 'the good life'; molecular biologists of 'artificial life'. Conservatives in abortion debates call themselves, not pro-God or pro-Christ, but 'pro-life'. We talk about lifestyles and, rather differently, about the 'meaning of life'. We ask, are there forms of life on such and such a planet, in such and such a desert, at the bottom of such and such a sea? We are obsessed with life and *the organic*. We worry about GM foods with their modification of the organic. Middle-class liberals shop in the '*organic*' section of our supermarkets, if they can afford it. Poorer liberals may want an *organic*, holistic medicine. And conservatives will view the nation as an *organic* whole: as an organism. We encounter thus lots of chatter, lots of worry about 'life'. 'Life', however, is different than '*forms* of life'. What might *forms* of life be? A form of life is a 'way of life', a mode of doing things. A culture, in the anthropological and the everyday sense, is a form of life, a way of doing things. Hence *multi*-culturalism, promoting a plurality of forms of life, is seen by some as a threat to the integrity of French or British, German or Austrian culture. Multi-culturalism is seen as a threat to 'the American way of life'. Forms of life embrace both natural or biological forms of life, on the one hand, and social, or cultural forms of life, on the other.

We think so naturally in terms of 'life' and forms of life that it is strange to consider that this was not always the case. Michel Foucault (1966) in *The Order of Things* wrote that we only began to understand nature and society

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■ *Theory, Culture & Society* 2001 (SAGE, London, Thousand Oaks and New Delhi), Vol. 18(1): 105–120  
[0263-2764(200102)18:1;105–120;016593]

in terms of 'life' in modernity, in the 19th and 20th centuries. Previously, we understood things in term of 'classification'. Hence in regard to the natural world, there was the predominance of natural history, in which the idea was to *classify* natural things into genera and species. In regard to culture and the study of language, the idea was to use the classification categories of grammar. In pre-modern economics, there was mercantilism, the 'analysis of riches', in which again things are classified by words. But where there was once classification, in 19th-century modernity there is 'life' and the organism. In the life sciences, there is no longer primarily genus-species and anatomical classification but in modern biology the organism, the living organism and its functions become the field of study. In language, it is no longer classification according to the elements of grammar that is dominant. It is now the philological study of natural languages, in which a language is studied as a living organism at the root of a national culture. In the economy, there is a move from the classification principles of the older mercantilism to modern political economy and the labour theory of value of Ricardo and of Marx. Here the economy is an organism, with labour at its heart. At stake is the 'reproduction' of an economic unit, or, as Marx put it, 'accumulation', which is the expanded reproduction of the economy as organism.

The adoption of the life or organic metaphor spread in the 20th century to emergent sociology and anthropology. Thus the functionalism of Talcott Parsons and the early Emile Durkheim saw society as an organism; and Radcliffe-Brown and Malinowski saw culture as a self-reproducing physiological system. This organic model was a reassertion of the positivist tradition. But the idea of forms of life – the lineage of Wittgenstein's notion – is intrinsically anti-positivist. Life here is not organicist but vitalist; it is phenomenological. Thus the centrality of 'life' or life-force in *Lebensphilosophie*: of Nietzsche, Bergson, Dilthey and Georg Simmel (and, in the novel, Proust and Joyce). There is a shift here from the disembodied Cartesian ego to the 'life' of the body, from cognition to perception; from Newtonian time to the time of experience. The governing concept in this is Husserl's notion of '*intentionality*'. In phenomenology, we make sense of things through, not neutrality, but 'intentionality'. We have knowledge, no longer from the neutral position of objective observer, but from a position of 'interest', from an 'attitude' to something. With intentionality, with an attitude, we are in the world, in the '*life-world*', with whatever we are investigating. Phenomenological inquiry makes sense of the world less through 'intellection', but rather through what Husserl and Bergson called 'intuition'. We have knowledge, not through the abstraction of judgement, but through the immediacy of experience. Intuition is more bodily and organic than intellection; experience more life-like (*Erlebnis* in German) than judgement. The time of judgement is abstract, Newtonian time, while the time of experience is the stream (the flow) of sense-impressions, experience; it is the stream of consciousness or unconsciousness. One knows, one imposes an order on, things, no longer through judging and classifying from above. Knowledge instead comes through experience, 'below', in the same life-world with people and things.

To make sense of (natural and social) things is to ascribe meaning. The sense-maker in the regime of classification (which is still with us in the various guises of positivism) attributed logical meanings to things. This is true not just in the human sciences, but also of classical narrative and perspectival painting. The regime of classification made sense of the world thus through *epistemology*. ‘Epistemology’, as Hans-Georg Gadamer (1976) notes, is preoccupied with the status of knowledge, with what constitutes valid scientific knowledge, with indeed objective knowledge, with the correspondence between representations and things. But in phenomenological engagement, we make sense, less through logic and epistemology than through *ontology*. We experience or interrogate things and people less in regard to their logical meaning than their *existential* meaning. We are looking for ontological meaning. The neutral and detached space of the scientific observer can yield epistemological knowledge, as Kant noted, of the *appearances* of things – i.e. cause and effect, explanation. But experiencing things, through being in the life-world with them, can open up knowledge of *things-in-themselves*. To know things-in-themselves is to know them not epistemologically, but in their ontological structures. This sort of knowledge of deeper, ontological structures is also central to Freud, where the thing-in-itself was the unconscious; and for Marx, where it’s social class (*Klasse-an-sich*). Thus in forms of life, knowledge takes place in the life-world, through the subject understood as life (the body, class interest, the unconscious, the will to power). Through being no longer above things, but in the world with things, we come to grips, not with epistemology and appearances, but with deeper ontological structures.

### **Technological Forms of Life**

What happens when forms of life go technological? In technological forms of life, we make sense of the world through technological systems. As sense-makers, we operate, less like cyborgs than interfaces. These interfaces of humans and machines are conjunctions of organic and technological systems. Organic systems work on a physiological model. Technological systems work on a cybernetic model. Cybernetic, self-regulating, systems work through functions of intelligence, command, control and communication. We do not merge with these systems. But we face our environment in our interface with technological systems. As such an organic-technological interface, I say, ‘I just can’t function without my WAP mobile phone. I can’t live without my laptop computer, digital camcorder, fax machine, automobile. I can’t function without Ryanair, Amazon.com and my cable, satellite and interactive channels.’

I operate as a man-machine interface – i.e. as a technological form of natural life – because I must necessarily navigate through technological forms of social life. As technological nature, I must navigate through technological culture. And technological culture is constitutively culture *at a distance*. Forms of life become forms of life-at-a-distance. Because my forms of social life are so normally and chronically at-a-distance, I cannot navigate

these distances, I cannot achieve sociality apart from my machine interface. I cannot achieve sociality in the absence of technological systems, apart from my interface with communication and transportation machines. Technological forms of life are life-at-a-distance: not just culture, but also nature-at-a-distance. The Human Genome Project and the various human DNA databases are nature-at-a-distance. What was previously internal and proximal to the organism is stored in an external and distant database as genetic information. What was previously internal to my mental life is also storable in a distant information database. In technological forms of life, what were more or less closed systems, my body, the social body, become more or less open systems. My body cannot interface with technological systems unless it is more or less open. The social body (nation-state) cannot interface with another unless each is to a certain degree open. When individual or social bodies open up, their organs are often externalized at a distance. This is true of the institutions of nation-states as well. Technological forms of life, whether natural or social are like Deleuze and Guattari's (1983) 'body without organs'. As they open, they externalize their organs, and open up to flows of information and communication.

With technology, forms of life get *flattened*. They become *non-linear*. Forms of life become *lifted out*.

### *Flattening*

Harold Garfinkel (1984: 35) is a theorist of technological forms of life. He takes the 'awe' of the within, of interiority, and he externalizes it on to the everydayness of the 'without', on to the technical, the practical. He takes the depth of ontological structures and flattens them out into what is a radical empiricism of technological forms of life. In both classification and forms of life, there is a focus on the vertical. In both there is a certain verticality. With classification, there is the verticality of subject and object, of classifier and classified, of universal and particular. Forms of life, however, give us a new verticality, new dualisms. For epistemological dualism is substituted ontological dualism. Both these models of verticality are based on a transcendental term, on the one hand, and an empirical term on the other. The forerunner of this is of course the dualisms of religion, of the sacred, as the transcendental term, and the profane, as the empirical. In already secular classification, the transcendental comprises the categories of classification. And the empirical comprises the things to be classified. In classification (or epistemology), the transcendental stands 'above' the empirical, as subject to object. In forms of life and ontology, the transcendental term stands 'below' the empirical (e.g. the unconscious, ontological meaning, Marx's infrastructure). A dualism 'from above' is displaced by a dualism 'from below'. A dualism of height by a dualism of depth (hence, 'deep ontology', 'deep structures'). In *technological* forms of life, the transcendental term is flattened into the empirical. The dualism of epistemology and ontology is flattened into the radical monism of technology.

In the world religions, the transcendental entailed the cosmological

privilege of the priest (Parsons, 1968). In classification, the transcendental implied the epistemological privilege of the scientist, the philosopher (Durkheim and Mauss, 1963). In *forms of life*, we have the ontological privilege of the psychoanalyst, the proletarian party and the artist. In *technological* forms of life, these privileges are thrown into crisis. Now the unconscious surfaces into the everyday; as the transcendental of the economy collapses into culture of everyday life; and as art becomes just another mode of communication. Technological forms of life suggest, not positivism, which is the subject–object type thinking of classification, but *empiricism*, in which the observer is in principle not fundamentally different from the observed. Look closer at phenomenology: at the shift from the transcendental and philosophical phenomenology of Husserl/Heidegger to the socio-technical and empiricist phenomenology of Garfinkel. First, the transcendental reduction disappears. The transcendently reducing philosopher is himself reduced or flattened into an empirically observing actor, who is neither better nor fundamentally different from the social processes he observes. By definition, intentionality needs an ego and an object. With the disappearance of a transcendental ego (and Heidegger's *Dasein* is a variant of this), there is no sense any more to ontological structures. Deep meaning disappears. What remains is empirical meaning. Empirical meaning is neither logical (as in classification) nor ontological, but everyday and contingent.

This entails a transformation of reflexivity. Reflexivity was always a question of going beyond classification and epistemology, in order to gain some kind of knowledge of ontological structures, however opaque. Thus Kant spoke of 'reflective judgement', which – unlike determinate judgement – was aimed at deep, ontological meaning; Hegel similarly spoke of 'reflection' and Husserl of the 'reflective attitude'. In each of these cases there is a distancing of the 'reflector' from the everyday, a move into a separate space for reflection. Meaningful (as distinct from trivial) knowledge, on the one hand, and forms of life, on the other, are still separated. Now, consider Garfinkel's empiricist phenomenology. Now reflexivity is no longer separate but 'incarnate' in activities. Knowledge is 'reflexively *tied*' to activities, expressions, events (1984: 1). In such an empiricist phenomenology there is no longer any distance between knowledge and practice; knowing no longer reflects on doing; instead, doing is, at the same time, knowing. Logical and ontological knowledge no longer have a separate status from trivial everyday or empirical knowledge. Such reflexivity is closer to a 'reflex', than the distance of reflection (Beck, 2001). Reflexivity in technological forms of life does not involve a dialectic of theory and practice. Dialectics presumes two levels. Technological reflexivity assumes a *fusion* of theory and practice. Theory is 'incarnate' in practice.

In this empiricist phenomenology, sense-making loses its interiority. There is a flattening of the interiority of the subject. The expressive subjectivity of the artist, the analyst, the philosopher, the interiority of proletarian consciousness is eroded. Expressive subjectivity presumed

consciousness as an interior monologue. Meaning was somehow in consciousness. One made meaning for oneself. In technological forms of life, sense-making is for *others*. Sense-making is account-giving, it is 'glossing', it is *communication*. Sense-making or knowledge is the glossing, the account-giving of everyday activities that is inseparable from those activities. Reflexivity in the technological culture is not a separate process of reflection. There is no time, no space for such reflection. There is fusion of words and things, of thought and practice. Further, to think is not just at the same time to do; to think is at the same time to communicate. In the technological culture, reflexivity becomes practice; it becomes communication.

### *Non-Linearity*

Technological forms of life are non-linear. This involves:

#### (1) Compression

Technological forms of life are non-linear first, as units of meaning. This entails compression. Linear units of meaning, such as narrative and discourse, are compressed in the technological age into abbreviated, non-extended and non-linear forms of meaning such as units of information and communication. We previously made sense of the world mainly through narrative and discourse. Now we make sense through abbreviated units of information. Note that I am not speaking about information overloads. I am not saying that there is so much information about that we cannot attach meaning to all of it. The constant bombardment by signals, the ads of consumer culture and the like does not constitute information. It is chaos, noise. It only becomes information when meaning is attached to it. Information only happens at the interface of the sense-maker and his/her environment. Or at the interface of the environment on the one hand, and the interface of sense-maker and his/her attached information and communication machines on the other. If there is no meaning, then there is no information. Out there, otherwise, is just chaos or noise. Richard Sennett (1998) has argued that meaning is drained from life with the decline of life-narratives. I disagree. Meaning just gets different. Meaning becomes informational.

#### (2) Speed-Up

As regards time, the break with linearity involves speed-up. Forms of life are speeded-up in technology. In 'simple' forms of life, we have narratives and meta-narratives. A certain pace of movement of time is conducive to such narratives and meta-narratives. Just about the right pace for reflection. Technological forms of life are too fast for reflection and too fast for linearity. They not only compress linearity; they outpace it. In speed-up culture becomes increasingly ephemeral. The monument lasts for centuries, if not millennia; the novel for generations; a scholarly book a decade. The newspaper article has value for just a day. The pyramids took centuries to build; the scholarly discourse of a treatise – entailing reflection – takes, say, four years. The newspaper report on the latest Arsenal football match must be

written and wired within 90 minutes of the end of the match. This leaves no time for reflection, and scarce dedicated space as we compose messages in trains, on planes and read our email on mobile phones.

Superman, who was an extra-terrestrial, was faster than a speeding bullet. Technological forms of life are quick too. They are sometimes as fast as the speed of light. They are faster than a meta-narrative. Cyclical time, as Max Weber noted, is really slow. Narrative time, whether that of the novel, the life-narrative or the meta-narrative of progress, is quite a lot faster. Technological time doesn't so much refuse meta-narratives; it outpaces them. Technological time does not so much question progress; it is too fast for progress. It believes in progress, yet is too fast for it. Now we get better and better even faster than in the Whig notion of history. We improve so fast in technological time that improvement itself is thrown into question.

Technological time is too fast for the cause-and-effect of Newtonian time. Invention is so fast that we outpace the logic of cause-and-effect. The torpid slowness of cyclical time meant lots of security. The quicker time of cause-and-effect meant that we needed to organize our own security. Technological time outpaces the determinacy of causality; it leads to a radical indeterminacy, to radical contingency; to a chronic insecurity. This breakdown of linear time gives us the risk society (Beck, 1992). When the linearity of Marxist blueprints disappears in Eastern Europe, there is sudden insecurity. Outpacing the predictability of causal logic, we are thrown into the unpredictable logic of consequences. Sociology classically, in Weber, Marx and Durkheim, was obsessed with the causes of modernity. Technological speed-up puts the focus on modernity's *consequences*. The language of consequences is non-linear; if they were linear, we would not worry about them. And it is not the failure but the success of linearity that is at fault.

In cause, we look to the past to explain the present. In consequences, we look at the present as causing risks in the future (Arnoldi, 2000). Our gaze is firmly on the future in technological forms of life. In a distant past, we invested in landed property; that was the basis of security and continuity (*Blut und Boden*) over the generations. Here value formed a link with the past. More recently, we invested in shares in manufacturing firms whose assets and turnover were approximately equal to their market capitalization. At that point, value was in the present. In the technological age, value is in the future. We find our security by investing in the most radical insecurity, by investing in contingency. Hence Microsoft, on a turnover of approximately \$15 billion, has had a market capitalization of some \$160 billion, some 15 times its assets and turnover. Lastminute.com had approximately £20 million of sales in the past year. Its market capitalization will be about £400 million in its February 2000 public share issue.<sup>1</sup> In the technological age, capital accumulates in the future. What is true for capitalism is true for welfare. The classical welfare state was about social engineering to make life better in the present. Genetic engineering is about welfare in the future. The new generation is not the 'now generation', but the 'not yet generation'.

## (3) Stretch-Out: Discontinuity

Technological forms of life are stretched out. The medieval city had organic, almost natural, almost familial social bonds of apprentice, journeyman and master craftsman. It had winding and meandering streets, following the natural gait of cows and sheep. The modern nation-state has linear bonds. Relationships, and hence the social bond, are more role-specific than diffuse, as the linear contract replaces organic status. This is already a stretching out and thinning of organic bonds. The 'imagined community' of the modern nation-state displaces the medieval, real community. This is an imagined community because the people in it cannot possibly know one another face to face. The imagined community of the nation-state is already the beginning of culture-at-a-distance. Not just social bonds, but spatial links straighten out and become linear: in national roads, railroads, telephone land-lines and electricity grids. As stretched out and linear, there is, however, a continuity of spatial links, a continuity of social bonds.

But technological forms of life are *really* stretched out. They are too long, stretched out too far for linearity. They are so stretched out that that they tear asunder. Spatial link and social bond break. They then reconstitute as the links of non-linear and discontinuous *networks*. The technological culture is a network society. The links of networks are so thin that they occupy almost no breadth at all. They are, to cite Bruno Latour (1993: 119), 'topological' rather than 'topographical'. They are connected not by the social bond *per se*, but by socio-*technical* ties. They are joined by links that are as much technical as they are social. Networks are somehow *inorganic* at the same time as organic. There is something artificial, not life-like at all, about networks. They are culture at a much greater distance.<sup>2</sup> If social bonds (of nation) are held together by myths of origin, the socio-technical links of networks are held together by far more tenuous units of meaning. They are held together by *communications*: the telephone call, the globally televised football match, the last exchange of emails.

In a sense, transportation is just another form of distanced communication. In each case there is a symbolic exchange between A and B at a distance. Forms of life are so stretched out in the age of technology that the linearity of roads and lines is no longer long enough. Hence, communications are increasingly via non-linear and discontinuous 'ports' (McLuhan, 1993: 179ff.): through airports, 'teleports' of mobile phones, modem ports, through Internet portals. To move from port to port is to move, not in a straight line but to hop about, to move discontinuously. Networks in this sense are non-linear and discontinuous. The movement along networks is often in several directions at once, and not along a straight path. Things get 'diffused' through networks. The network society is a society of flows, a society of global communications (Castells, 1996). Flows are of many things, prominent among them is information. But all flows are also flows of communications. Marx's manufacturing society was based on the machines that transformed nature. Today's machines are less about the transformation of nature, or even the transformation of culture (information), but about the

*transmission* of culture (communications). The society of flows, the network society is less an information society than a *communications* society.

National communities are linear and continuous. The links between global cities are non-linear. Multiculturalism and cosmopolitanism are non-linear. The idea of integration into a national, imagined community – whether in the American ‘melting pot’, French republicanism or German Constitutional Patriotism (Habermas’s *Verfassungspatriotismus*) – is linear. They work from pedagogic narratives of integration. But technological forms of life are less linear than ‘mosaic’. They involve a mosaic of networked communities. Cosmopolitanism is a question of citizenship, and universalist citizenship rights. But it is also a question of culture, of *multiculture*, instead of the uniform culture of the melting pot. Assimilation means making the same, i.e. a certain ‘endotism’. Multiculturalism and cosmopolitanism presumed a mutual exoticism, yet the opening of a conversation. They presume a mutual ‘going native’. They involve, not assimilation to a Western norm, but Hannah Arendt’s putting oneself in the place of the concrete and particular other. Multiculturalism here refers to not just the (mosaic) character of a given geographical territory. It refers also to the plural identification of mobile and transnationally networked individuals. When the Turkish diaspora stretches from Ankara to Berlin to Hackney, and communications to all of these places become ever cheaper, then plural identification means a more tenuous link to any one culture. It means more space for strong elements of *dis*-identification with the diaspora altogether. The tenuousness of the networks of technological forms of life leaves space for individualism, for contingency, for nomadic subjectivity. Multiculturalism is also culture at a distance. It is a given single culture spread or stretched over a distance. It also means that different cultures – previously at a distance – come face to face with one another.

### *Lifting Out*

Technological forms of life are disembedded, they are somehow ‘lifted out’.

As lifted out, they take on increasingly less and less the characteristic of any particular place, and can be anyplace or indeed no place. This lifted-out space of placelessness is a generic space. It is not any particular space, but a generic space. It is characterized not so much by multiple identities, but by an absence of identity (Augé, 1995). Its context is no context at all. Its difference is indifference. Airports and indeed aeroplanes are such generic spaces (Koolhaas, 2001). So are the branded spaces of department stores: one Ralph Lauren section is interchangeable with another, one Boss with another, one Tommy with another. The department store could be in Tokyo, London, Chicago, as could the airport. Many theme parks, Disney, Universal, are such generic spaces. One McDonald’s is interchangeable with another; one Benetton with another; one Warner Village with another (Franklin et al., 2000). The Internet is a generic space. It is no particular space. Indeed, networks are themselves by definition lifted-out spaces. CNN and the world of the Teletubbies are generic spaces.

Generic spaces are disembedded and never really re-embed (Knorr-Cetina, 2000). Sometimes this involves a literal lifting out, as in air transport, mobile telephony and digital satellite television. Sometimes there is a 'digging in', as in cable television and underground broadband Internet connections. In all cases, social interaction is on a different level from ordinary forms of life.

The 'laboratory' is such a generic space. The laboratory is 'lifted out' from normal life. It consists not of men in blue collars, but people in white coats. In normal life, people do routine things. In laboratory life, they discover things; they invent things. The laboratory produces not goods, nor services, but knowledge; it produces research. The laboratory is a generic space. Whether in Tokyo, Paris or Los Angeles people wear white coats. Laboratories are filled with similar equipment and the same scholarly and professional journals. In laboratories people must know English and be digitally literate. There is a certain context-lessness about the laboratory. Twenty years ago Bruno Latour and Steve Woolgar (1979) wrote *Laboratory Life*. Twenty years later, more and more of normal life is becoming laboratory life. When Latour and Woolgar wrote, the laboratory produced scholarly papers. Now it just as often produces *prototypes*. Research has become increasingly research & development. Laboratory science becomes increasingly technological, as bio-technology scholars and computer science whizz-kids from the universities, produce prototypes, set up their own small firms and strike it rich. There is a double movement here. First, science 'descends', so to speak, from its pure autonomy to become techno-science. Second, there is the rise, so to speak, of everyday social relations to become, themselves, forms of laboratory life. At the same time, science and society become technological.

The same happens in the arts with the phenomenon of 'the studio'. The studio was a space of creativity, lifted out from routine forms of life as pure art. Pure painting, sculpting, composing music went on in the studio. But now the new media wings of global publishers like Bertelsmann have become 'Bertelsmann Studios'. London multimedia firms like AMX Digital have renamed themselves AMX Studios. A successful architects agency like Libeskind in Berlin is Studio Libeskind. The largest digital media university research and training site in Europe is the new Malmö University Studios. What is produced in the new studios (and laboratories) seriously flies in the face of the idea of genius of the autonomous artist and scientist. This is because it is collectively produced. The model for the new studios of 'techno-art' is of course Hollywood cinema. What the laboratory and the (Hollywood and new) studio make are *prototypes*. This is unlike the factory, which makes copies; and the office, which circulates those copies. The laboratory and the studio make prototypes. And when consumption gets increasingly specialized, and product markets increasingly unpredictable, competition becomes a question less of 'copies', than prototypes. Progressively more people work in prototype production. 'Laboratories' and 'studios' spread to more and more economic sectors. Life itself becomes increasingly like laboratory life. Like

science, art descends from its autonomy to become techno-art and sell its prototypes on the market.

Laboratories and studios produce prototypes. The difference is that laboratories get their prototypes patented. Studios (including of course software firms) get their prototypes copyrighted. Patent and copyright are of course forms of intellectual property. Material prototypes are patented. Symbolic prototypes are copyrighted. Laboratories make prototypes of material goods for patent. Studios make prototypes of symbolic goods for copyright. Studios do not just involve symbolic *labour*, as do offices. Studios *invent* symbolic goods. All intellectual property is lifted out, is disembedded in comparison with real property. Real property is based on the accumulation of capital; intellectual property on accumulation of information. Real property is based on accumulations of the same: as Marx said, 'homologous congealed labour time'. Intellectual property is based on the accumulation of difference. Every prototype must be different from the one before. Intellectual property is based on the accumulation of symbols, of meaning. To have meaning, there must be intelligible difference. Today, the production of prototypes (of intellectual property) has become routinized. Today production entails chronic invention, the chronic repetition of difference. Patent is the chronic invention of the real; copyright, the routine invention of the imaginary.

We spoke about brand environments as lifted-out, generic spaces. This involves the third category of intellectual property, the trademark (Lury, 1993). If you copyright a material (technological or natural) good and you copyright a symbolic good, then what do you trademark? You trademark a logo or a name (like McDonald's or now Mick Jagger). What is trademarked are '*marks*', be they colours, names or logos (Franklin et al., 2000). To trademark is to make these marks intellectual property. It is to award exclusive rights in these marks. These marks, and the meanings attached to them, are known as 'brands'. In French and in German, the word for brand is indeed *Marken*. And in English or at least American English, we brand a steer, by marking him with the logo of our ranch. Whereas patent and copyright presume the invention of a prototype, trademark does not. For marks (like those of Boots the Chemist or Virgin or Ford) to be trademarked they – the marks and the goods and services associated with the marks – must already have a presence in the public domain. In some case there is trademark protection awarded to a mark for which there is not yet a range of goods and services: for example Mick Jagger, who now, it seems, intends to bring out a range of products under this mark. Whereas you copyright a book, record, bit of application software that is new when you want to get it out into the public domain, a trademark is already in the public domain.<sup>3</sup> When I make a bit of money from writing a wonderful and innovative book, it is through copyright. When I subsequently write a bad book and it still sells, then it must do from my name as brand and effective trademark. When I write a third, pretty good book, which then doesn't sell at all, it may be because my brand value has declined.

Trademark as intellectual property, and the work of branding, seems to be increasingly central to 'studios'. Like other work in studios, it is not so much work of production, as *design*. But, unlike other work of design, it does not create new units of intellectual property. It instead *valorizes* existing units of intellectual property. These existing units are the marks or brands (Lury, 1999). In new media studios it seems that there has been a shift in the direction of trademark-oriented work and branding. New media firms were at one time primarily oriented to producing CD-ROMs, web-graphics and computer games, i.e. prototypes as symbolic goods that would come under copyright. They were producing new bits of intellectual property. Now they seem to be spending a lot more of their time doing branding work for other firms. They are now thus increasingly a business service, valorizing trademarks, as existing intellectual property. New media firms are increasingly doing work for the dotcoms, designing sites and e-commerce facilities (i.e. making a marketplace) for the dotcoms. Further, more classical advertising is now doing brand valorization for the dotcoms. E-commerce is buying at-a-distance; consumer culture at-a-distance. It is forms of life at-a-distance. What is happening here is terrestrial brand valorization of technological forms of life.<sup>4</sup>

'Platforms' are lifted-out spaces. Microsoft Windows Operating System is such a platform. It comes under intellectual property law, the law of copyright. But platforms are not necessarily proprietary. The dominant European platform for mobile phone communications is not proprietary – no one has intellectual property rights in it. Neither is the Linux operating system, or Unix as an operating system for servers. Platforms are very special kinds of intellectual property. Without them, one cannot gain admission to participate in various forms of technological life. Platforms may or may not be 'standards'. There is no standard yet for set-top boxes for digital television. The platform for European mobile phone voice communications is a standard. In the USA there are competing platforms and not yet a standard. Where there are competing platforms, the issue of proprietary or non-proprietary is important. Where there is a standard it is crucial. If you own a proprietary standard you are in fact a gatekeeper for the world. Unless they pay you a licence fee, they are excluded from technological forms of life. Other platforms for technological forms of life are airports, and space in the right districts of global cities. You often need capital for access to these platforms, these generic spaces. They are expensive. You need cultural capital as well as economic capital. You need the 'social capital' of the right networks (Leadbeater, 1999). At issue may be a new type of social stratification, in which social class depends on relations to intellectual property and rights of access to the lifted-out spaces of technological forms of life.

### **Conclusions, Politics**

What about power? In technological capitalism, power works perhaps less through exploitation than exclusion. Real property in the means of production carries with it the right to exploit. Intellectual property carries

with it the right to *exclude*. The ownership of trademark prohibits anyone else from valorizing that trademark. This is how modern sponsorship works. The valorization of patents of human and plant DNA from the 'Third World', is the stake in the struggles around globalization at the WTO in Seattle. The ownership of copyright in a platform, which is a standard, is the stake in power struggles between the US Department of Justice and Microsoft. These are struggles involving not just questions of who owns the DNA database and who owns the platforms, but about pushing back the boundaries of the proprietary as such. Social class becomes a question of access to the platforms, access to the lifted-outness of technological forms of life. It becomes a question of access, not just to the means of production, but the means of invention.

In technological forms of life, not just resistance but also power is non-linear. Power itself is no longer primarily pedagogical or narrative but instead, itself performative. 'Nation' now works less through 'narrative' or 'pedagogy' but through the performativity of information and communication (Deleuze, 1995). Power works less through the linearity and the reflective argument of discourse (or for that matter the linearity of ideology), than through the immediacy of information, of communications. Power works perhaps primarily neither on the level of the reflective intellect nor on the level of the unconscious, but on the level of tacit knowledge. Power may be less disciplinary than it is itself, nomadic in the shape of multinationals, footloose to move from country to country. Again these footloose companies work less through exploitation than exclusion from the means of production. Politics in technological life is also a politics in which those at the interface of technology and forms of life, the already significant and increasing numbers employed in the laboratories and the studios, will play an ever more important role. Finally, politics in technological forms of life will increasingly problematize the future. This is the case of course with the politics of nature: in environmental politics, and the politics of DNA and GMOs. Capital itself increasingly accumulates in the future.

### **Postscript**

This was my inaugural lecture at Goldsmiths College, London University, delivered on 22 February 2000. Thus I have not altered it in line with referees' comments. In this postscript I will respond briefly to criticisms by *TCS*'s anonymous referees.

One referee questioned the definition of technological forms of life as 'culture-at-a-distance'. He/she suggested that I took this definition from Zygmunt Bauman. Indeed, I am unaware that Professor Bauman has written on this. The idea was developed instead in tandem with Kevin Robins in the midst of planning research on ICTs and transport. It is as much – or more – Kevin Robins's idea as mine, though I want to take responsibility for its shortcomings. The assumptions in this article and my work elsewhere are radically different to Professor Bauman's approach. His assumptions seem

to be, on the one hand close to those of deconstruction and theories of difference, and, on the other, to the sort of time-space distanciation theory of Anthony Giddens. Unlike Professor Bauman, my assumptions are not particularly constructionist.<sup>5</sup> My assumptions are less of difference than immanence and the emergence of a generalized *indifference*. They are of an informational political economy of flows and machines. Moreover, Bauman's admirable work has been concerned with ethics, mine more with description.

The same referee then asked 'culture-at-a-distance from what?'. Good question. The answer is apparent only in comparison with the ideal type of forms of life the lecture sketches. At least implicitly, forms of life have meant culture-in-proximity and not primarily at-a-distance. Clearly there are distances involved in forms of life, and proximity involved in technological forms. But, pervasively, technological forms are at-a-distance. Even the 'compulsion of proximity' in contemporary society is often, so to speak, at-a-distance (Boden and Molotch, 1994). That is, we often travel considerable distances to engage in all-important face-to-face encounters. So 'culture-at-a-distance' primarily means culture at a distance from one another. Implicit in its ideal-typical counterpart, culture-in-proximity is a Maussian model of symbolic and gift exchange. Thus symbolic exchange in proximity is a defining feature of forms of life. And culture-at-a-distance becomes pervasive in technological forms of life.

This leads to the question of 'communication'. This same referee objected to my discussion of art becoming increasingly a question of communication. He/she argued that art has always been about communication. This, it seems to me, depends on one's definition of communication. In the above I meant communication in a narrower sense. The editor of *Flash Art*, the world's best-selling art magazine, has argued that art, like advertising, is coming to take on primarily communication functions. At the moment, advertising firms are re-branding themselves as communications solutions companies. 'Communications' are ephemeral; often promotional or self-promotional, they tend to take place at a distance. They are often machine-mediated. Art previously, in my ideal type, was about duration. It was about an ersatz sacred, not something which is imploded into everyday life as communications are.

The reader objects that I contradict myself. He/she notes my statement that we do not merge with technological systems. He/she notes that I then go on to say that we 'navigate through' 'technological culture' and 'technological nature'. It seems to me that our navigating through these media does not entail our merging with them. We attach to informational machines, but do not merge with them. A similar argument might be made in the context of biotechnology.

The same reader objects to the section on politics and inequality towards the end of the article. He/she notes it was not sign-posted at the beginning. Point taken. Technological forms of life are not just about speed, and invention. Through mechanisms like exclusion (as distinct from exploitation) and intellectual property (as distinct from real property),

technological forms of life do lead to new forms of power and greater, distorted inequalities.

Finally, the first referee objects to the insufficiency of development of the notions of ‘flattening’, ‘non-linearity’ and ‘lifting-out’ in the lecture. Fair points, and a limitation of this article. I devote a lot of space to each of these in my forthcoming *Critique of Information*.

A second referee queried the notion of technology implicit in the essay. He/she would rather define technology in the sense of the production of artefacts. I would agree. Indeed this is a major dimension in which technology stands in distinction from science and art. Science and art normally presuppose some sort of transcendental notion of truth, beauty or sublimity. This is the case no matter how phenomenologically we want to understand science and art. Artefacts, for their part, are very *un*-transcendental. They share this characteristic with the commodity. Yet, unlike the commodity, artefacts are very hands-on and material. This said, in the above I was not attempting a definition of technology, but only of technological forms of life. Moreover, I was only developing this idea ideal-typically in contrast to ‘simple’ forms of life. The referee goes on to object that the lecture’s implicit notion of technology was similar to Heidegger’s in its thrust and amorphous generality. I am sorry that my discussion was amorphous, but what I had in mind were concrete everyday technologies like mobile phones, PDAs, interactive television, digital TV, the Internet and cheap long-distance travel. Also, the above idea of technology is very anti-Heideggerian. It is consciously conceived as opposed to Heidegger. Heideggerian technology would be characteristic of simple forms of life. Heideggerian technology makes impossible the ‘sending of Being’. For Heidegger everyday in-the-world *zuhanden* activity with artefacts would, as it were, facilitate the ‘disconcealment’ of Being. In contrast, technology as ‘standing reserve’, as effectively instrumental rationality would be unfavourable. On my above model of technological forms of life, technology as standing reserve is flattened into forms of life themselves in the same immanent plane. In this, Heidegger’s distinction begins to lose significance.

#### Notes

1. Even after the NASDAQ crash, at time of proofreading in March 2001, the share price/profits ratio of technology stocks is twice that of other stocks.
2. Kevin Robins and I coined the idea of ‘culture-at-a-distance’ together.
3. The ideas in this paragraph are all taken directly from Celia Lury. I am responsible for any misinterpretation.
4. Thanks to Andreas Wittel on this. This chapter and the book are informed by research done on new media with Wittel, Lury, Deirdre Boden and Dan Shapiro as part of the Economic and Social Research Council Virtual Society? Programme.
5. Nor are they realist.

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