ESSAY 6

THE ENDLESS PURSUIT OF THE NEXT NEW THING

INTRODUCTION

A main theme of the essays in this volume is the unfortunate impact which postmodernism has had upon social science. The 'radical' re-thinking which this socio-philosophical approach demands has caused no end of muddled theorising. Nowhere is this more apparent than in those parts of Sociology which take an interest in the particular cultural forms of contemporary western society. As we have seen (Essay 1), the roots of post-modernist social analysis lie in part in the analysis of cultural artefacts to be found in modern homes. These *anthropological* (in the best sense of the word) studies have been taken as licence to extend postmodernist critiques to every facet of our lives and thus to create a whole domain of investigation aptly called *Cultural Sociology*.[32] The pervasiveness of post-modernism within the human sciences and the common theme of critique which is thereby espoused has resulted in a particular and peculiar fusion of social analysis and cultural commentary. From the global dominance of a small number of (often American) brands, to the obsession with health and fitness, to the awfulness of reality tv or the fashion for tattoos, whatever broadsheet Sunday Supplements are preoccupied with today is likely to be the next, new topic for Cultural Sociology. All the above have been grist for its deconstructive mill; each in turn analysed as but the latest instance of the insidious reproduction of post-capitalist consumer or power relations (or both). And so it is with the latest topics taken up: Web 2.0 and the services and applications it has spawned, as well as the fast emerging phenomenon of pervasive computing itself (i.e. the so-called 'internet of things'). Luminaries such as Scott Lash, are currently forming a bandwagon to roll out the definitive sociological account of the place and significance of digital technologies in modern society.

Now, at one level, this should not unduly perturb us. There is nothing new in forms of Sociology drawing their research directions from the concerns of the 'educated elite'. Second, as we have mentioned before, the capacity of sociological theorising to shape phenomena to fit its predispositions is almost its hallmark. Nothing would surprise (indeed startle) us more than to come across a study which definitively concluded that its favoured concepts were of little or no value in explicating its chosen topic.

At another level, though, apart from the banner headlines, breathless fervour and Henny Penny warnings of imminent disaster in which the analyses are couched, there is something distinctive about Cultural Sociology. In its pursuit of novelty and relevance, Cultural Sociology represents a new modality. With its concern with consumer goods and consumer patterns and its predisposition to follow fashion, Cultural Sociology is itself

[32] Of course, the social sciences have always been centrally concerned with culture. However Cultural Sociology embodies a distinctive take on what previously had been the province of the Sociology of Culture. See Nathalie Heinich (2010) for a particular view of this distinction.

taking on the characteristics of the cultural form it critiques. It provides easy to assimilate, pre-digested, boil in the bag sociological explanations which are fitted to the contemporary world of its analysis.

Because it is the stick that broke the back of our fortitude, we will use the discussion of recent digital technologies as the stalking horse for our examination. Quite unashamedly, we will cast it as a model for all Cultural Studies. By looking at this example in depth, we will try to bring out just how much:

1. The claims that are made about the phenomena studied are wild exaggerations based upon misapprehensions. These exaggerations arise because of the need to force the phenomena into the straightjacket provided by the concepts ready to hand;
2. The concepts which are deployed not only homogenise analyses so that they are easily understood but indistinguishable, they also direct attention away from those difficult to summarise and analyse features which make phenomena novel or distinctive and about which social science might, indeed, have some interesting things to say;
3. The mode of analysing (deliberately?) substitutes stipulation for discovery and in so doing violates its own methodological grounding. The result is a bundle of lightweight casual, mock-causal stories masquerading as explanation.

Since recent innovations in digital technologies are the ground against which this assessment will take place and because we find the portrayal offered by Cultural Sociology so inadequate, we will begin by briefly summarising (in as non-technical a fashion as possible) just what these technologies are and what makes them interesting and innovative *as technologies*.

Web 2.x, the Cloud and The Internet of Things

The pace of change in the world of digital technology is truly astonishing. One has only to reflect that just 15 years ago, the internet was unheard of outside academia and R&D labs and mobile telephones were almost the size and weight of bricks.

At the heart of these changes are three common trends:

1. The astonishing durability of Moore's Law;
2. The extraordinary resilience of communications networks;
3. The universalising of the web browser as user interface.

Moore's Law is the well known prediction that the number of transistors on a chip doubles approximately every two years. What has been powering this has been relentless improvement in chip fabrication methods and technology. The net result has been a continuous logarithmic increase in the power of chips together with an associated scale reduction in their size and cost. As a consequence, the size of the devices they power has also shrunk whilst, at the same time, delivering an increase in the computing power they can call upon. Today's mobile phones computationally are more powerful and flexible than the desktop pc of the 1990s.

The internet was designed to be a resilient communications network. It was funded by DARPA to provide a way of coping with any possible targeted missile attack. At its heart are two elements: the address system which provides an identifier (the IP address) for every device connected to the network; and the communications protocol (TCP/IP) for managing the communications. TCP/IP relies on multiple redundancy in communications paths. As the internet has grown, the protocol has shown a remarkable capacity to respond to scale. Equally, successive versions have allowed the expansion of the address system. The latest version (IPv6) which is now being rolled out will, in the words of our ex-colleague Craig Mudge, allow "everybody's

toaster to have an IP address". That is, with IPv6, the number of 'devices' which can have internet addresses (and hence be simultaneously available on the internet) will become effectively limitless.

The scaling up of the internet has in turn been driven by the growth in the world wide web and, in particular, the way that the web browser has become the favoured user interface for almost every application. What this did first was to allow individuals and organisations to publish (static) web pages on web sites. The web of sites could be searched by search engines and pages read through browsers. With Web 2.0, pages have become active and able to incorporate multiple media. The use of Java, XML and Flash technologies alongside the traditional HTML have enabled pages to be interactive and linked. It is Web 2.0 that has allowed the explosion of blogs, podcasts, social networking sites, as well as growth of shared repositories such as Flickr and so on.

More recently, two further developments have introduced yet more possibilities; 'cloud computing' and 'the internet of things'. In one sense the cloud has been with us ever since we had networked distributed computing. For example, projects such as SETI used the spare cycles donated by their owners of machines connected to the internet to undertake the computation tasks involved in the search for extraterrestrial life. Recently, though, new businesses have sprung up offering to provide data management services by hosting data across the internet. This has two key advantages. Customers no longer have to provide space and management resources for their data. This is proving a valuable financial saving for businesses and a relief from what was often poorly managed by individuals. Second, because data is stored in multiple places across the internet, data access and protection from loss is 'guaranteed'. The consequence of all this is that data repositories, both corporate and individual, are now migrating to the cloud.

Mobile telephony has ridden Moore's Law and mobile phones have moved to become internet devices. This has further reinforced the scale/power/cost trend but at the same time expanded the services into location-awareness and image capture. Almost anything (in fact just about anything) can now have "embedded computing" and with it the capacity to know where it is, capture information through sensors, and communicate this information across the internet. This trend has been called 'pervasive' or 'ubiquitous' computing and the extension of connected devices has been dubbed 'the internet of things'. The race is now on to provide valued services which take advantage of the fact that not only can the data generated by pervasive computing be linked and integrated but also that integrated data can be further linked and integrated with other public or 'open' data sources. The range of these services and how valuable they might actually be is unclear just now, as are the business models for them. Nor is it clear exactly how the balance between deep personalisation and robust privacy protection will be set.

Fears, Fantasies and Assorted Hobgoblins

C. Wright Mills taught us that the sociological imagination is a wonderful thing. Unfortunately, at times, it can also run away with us. This is precisely what has happened to Michael Beer with regard to the implications and hence significance of the of the technologies we have just outlined (Beer 2009). For Beer, these technologies have crept up on us (as we will see, quite who this 'us' is deserves some elucidation) unbeknownst and now have an insidious, pervasive and menacing presence in our lives. The menace comes equally as much from the fact we don't notice them, or even know they are there, as from the power they might exercise over us and the way they could channel our experience and behaviour.

The Technological Unconscious

What has aroused Beer's concern is the fact that digital technologies are everywhere, always on, and interact with each other in ways we cannot see and do not understand. All this information gathering, communication and re-purposing has crept up on us and we have not grasped its significance. We don't understand how it works and we don't understand what it is doing for and to us. Except, of course, it hasn't crept up on us and its

significance is very little different to the significance of other more traditional technologies with which we are very familiar.

To get a flavour of the hyperbole that Beer (and others) deploys, let us offer you a lengthy quotation.

> *Creating insights where software and the web are so much a part of how we live is inevitably fraught with difficulty. Not only do we have this problem of familiarity but, as already mentioned, these communications technologies often operate at the level of the 'technological unconscious' (Thrift, 2005). In other words, they operate in unseen and unknown ways. Unsurprisingly then, researching these systems is highly problematic.....*
>
> *.....What we have are forms of power that are reactive, concealed, and which are shaped on the ground at the multifarious points of communication. However, it is possible to begin in this article to make some connections between Web 2.0 and post-hegemonic power that might be useful in shaping an agenda for research into participatory web cultures – an approach, that is, that takes account of the way Web 2.0 interweaves with the 'technological unconscious'. (Beer 2009 pp 995-6)*

Two different orders of claim are being made here. First these technologies are so different that that standard concepts of social science (well, Sociology (well really Sociology of Culture)) cannot cope with them and so new concepts such as those of post-hegemonic power will have to be forged. Second, the reality of this difference is to be found in the way the technologies appear in our everyday lives. They are everywhere, so much so that we don't notice them. And they are concealed, so much so that we don't understand them. It is the fact of this dangerous insidiousness that is pressing the need for conceptual innovation in Sociology.

Both these claims are more than a little forced. Just how different are these technologies *as technologies* in our everyday lives? Do we need new concepts? and if so are the ones Beer prefers (i.e. Scott Lash's neologisms of 'post hegemonic power' and 'algorithmic rules') actually fit for purpose? To begin with though, how different is all this?

WHAT'S NEW ABOUT UBIQUITOUS BUT HIDDEN TECHNOLOGY?

Beer and the authorities he cites are not actually saying that technologies which use embedded computation are hidden. After all laptops, i-phones and i-pads, cctv cameras, smart cards, satnavs and the rest are evident all around us. What they are saying is that the *software* they use is not visible. We can't see it working. Or, at least, we can't see it working without going to a lot of trouble and learning to program the relevant application programming interface (API). This is, of course, true; true but irrelevant. It is equally true that you can't see what is happening in the innards of your car engine or fridge (two equally ubiquitous devices) without going to a lot of trouble and certainly learning some considerable engineering skills. The workings of the valves, pistons, con-rods, crankshafts (not to mention the engine management system) are all hidden away, and it is just as well too. Moreover, and this is even more important, as long as the car works, most of us are not interested in what is going on 'under the bonnet'. And when it doesn't work, we are usually wise enough to let someone do the investigating who does know what is going on and does have the knowledge, tools and equipment to take the engine apart. The fact that 'the inner workings' of the technology are not visible and immediately understandable is, then, an absolutely familiar part of (most) widely used technologies.

The implication that Beer et al want us to draw from the ubiquity of this new technology is, of course, that we take it for granted at our own peril. But when he first started talking about "ubiquitous computing", the late Mark Weiser (Weiser 1991) was actually trying to de-mystify computation by suggesting we should regard it

more like a utility (electricity or water) than a complex and arcane technology. Weiser's prediction (which, as we can all see, is coming to pass) was that computation would be available everywhere. Devices would simply plug in or tap in. Beer does not seem to find the ubiquity of electricity or water a challenge either to Sociology or society. Why should he think utility computation is? After all, the ubiquity of computing is in large measure a function of the ubiquity of electricity.

Of course, for Beer, it is not just that the technology is everywhere and hidden, but that most of us who use it, don't understand it and the uses to which it is being put. We not only can't see how it works, we couldn't understand it if we could. Software is mysterious and its language arcane. Ordinary people can't read or speak software. (Scott Lash (Lash 2001) actually talks about software as a kind of technological writing. We will come to that later). Again, this is true, but irrelevant. Most people can't speak or write the sub-atomic physics which is needed to understand electricity either but they have very little problem plugging in their CD or turning on the lights. At a push, we would guess that, if they have a theory of electricity at all, most people conceive it as some sort of fluid-like stuff flowing through the cables. And, no doubt, if asked most people would offer a similarly simplified but not wholly ludicrous account of how software works. It is a straightforward fact of ordinary life that what we might think of as commonsense theories of complex technologies rarely capture the deep understanding that science and engineering might give us. Nonetheless, we are not terrified of, oppressed by, or totally at a loss how to deal with them.

The insistent stress which they put on the novelty and distinctiveness of computation, serves to allow Beer and his colleagues to manufacture an array technological hobgoblins with which to frighten themselves, Sociology, and the rest of us. But these are childish fears. In and of themselves, the technologies are as hidden, as pervasive, and as embedded in our everyday lives as electricity, clockwork or the wheel. (How many people shopping in Tesco's could actually tell you how a wheel works or how they ride a bicycle?)

SLEEPWALKING OUR WAY TO DYSTOPIA

Of course, the hidden character of the technology isn't really what Beer objects to. It is the nefarious uses to which it is being or could be put. We can't see the technologies and we can't see what's being done with them. The two prime domains in which such 'hidden use' seem to arouse most suspicion, search engine recommender systems and linked data bases of public and personal data, nicely illustrate two characteristic features of Cultural Sociology; the generalisation from a small number of celebrated cases and the tendency to take the research agenda from the mass media. In the case of search engines, browser providers such as Google (and it seems that Google has now inherited the mantle of *The Evil Empire* from Microsoft) use the data about our search patterns they have collected to interpret over the structured sorting of web pages provided by Google's proprietary algorithms. This enables the search engine to 'serve' pages which it believes best fit what we are looking for. There are two supposedly hidden dimensions here. First, in the background, the browser is tracking our search patterns and recording them. It is this tracking which allows the widely circulating allegation that Google (or whoever) knows more about us than we know ourselves. An allegation reinforced by constant repeating of the apocryphal Scott MacNealy apothegm.[33] Second, because the sorting algorithms are confidential, we do not know the basis on which pages are indexed and weighted. Hence we cannot say, for example, how far commercial considerations influence the selection. Because Google will not reveal its algorithm (not surprising, since it is the core of its business model), the inference is drawn that commercial considerations must predominate. The net result is the suspicion that without our knowledge or agreement, Google is deliberately using its knowledge of us to direct our attention to some pages rather than others, and is doing so for commercial reasons.[34]

[33] "You have no privacy. Get over it!"
[34] We return the Google and its algorithms in Essay 7.

The second example is the increasing use of linked personal data to provide personalised product and service recommendations as well as other forms of marketing. Using private data such as loyalty, credit card or other retail data together with public, open data such as residential data from the electoral roll, census data and the like, data companies 'sort' individuals into 'retail' or 'purchasing types'. Populations of these types can be purchased and used for targeted marketing. The data that the Government, stores and credit card companies collect can be garnered, integrated and structured to enable bundles of relevant offerings to be made to us, some of which may be 'driven' by a knowledge not just of our preferences but of our precise location. As with the gathering of web pages, this collection and integration is held to be going on in the background and apparently without our knowledge or approval.

The claim of ignorance here is implausible though. Discussions of the media and especially of new media in the press and elsewhere constantly make reference to the fact that Google sets a price for page ranking, that pages can be 'written' to ensure high page ranking, and that loyalty card and other data can be bought from the organisations that collect it. Moreover, we all know that the junk mail we receive through the post and email is a consequence of using that data to try to work out what types of products we might be interested in. So the claim that 'we' (ie the general populace) don't know this is happening is more than a little patronising and/or misleading. We do know, and most of the time it doesn't worry us. The pages we are served provide the answers we were looking for (mostly). The marketing materials, adverts etc we are sent cover the range of products we are most likely to want to buy and we might (occasionally) even find to be useful. Moreover, and this is the rub, the sociologists who are warning us about these dangers get their understanding of the importance and scale of the issues for much the same sources as the rest of us.

To say the least, the claim that we are unaware of the practices being used and the reasons for them is stretched. This is not to say we can detail just how such technologies and their related practices work (why on earth should we expect to be able to? And if we could, would it make any difference?). As long as they work for us, we are prepared to take them for granted.

THE WORM I' THE BUD

For Beer, this concealment masks something else — namely the real significance of the changes that the technology is thought to be bringing. This is because it is insisted that computation just *is* different. What is being invoked is the claim (myth might be better) that computation changes everything. There is an irony here. In recycling the view that computation changes everything, Beer et al are swallowing whole the hokum peddled by gurus, consultants and other snake oil salesmen in the 1990s about how computation, the internet, something, was going to change the world. It would, they wanted us to believe, create a 'frictionless, knowledge-based economy'. Now, while Beer et al don't really believe that has happened or soon will (who does?), they do believe that Web 2.0 and the other associated technologies are somehow changing the world. In fact, it is just these changes, they claim, that Sociology is increasingly finding it impossible to cope with.

At the risk of using a broad and somewhat crude distinction, it is reasonable to think that the changes Beer has in mind, if they are occurring, should be visible either in the way that people routinely behave (they just are doing different things) or in the social processes that are institutionalised in society (society is organised differently); or both. At the risk of setting off methodological hares, we might say that both are *empirical* questions. That is to say, to find out if the changes are happening, one reasonable strategy might be just to go and look at what is going on and see what has changed and how far.

The work that has been done on both questions is pretty conclusive. Although texting, twitter, the forming 'friendships' on Facebook and other social networking sites, storage in the cloud, use of location-based personalised services and so on and so on are recently learned sets of behaviours, as patterns of behaviour they serve very traditional functions. Texting, twitter and Facebook are forms of communication; digital versions of sharing, chatter and gossip. True the 'followers' and 'friends' might be both known and not-known;

true the vocabulary might be distinctive (when isn't the argot of the young distinctive?), but as patterns of behaviour, they do no more (and no less) than the sharing, chatter and gossip networks of the past. The work that has been done indicates that the ways the sites and applications are used is remarkably like that of the structure of other social networks. In similar fashion, the on-line world of gaming (another domain held to be socially degenerative in some way) turns out to be very much like the off-line world of many other leisure pursuits. Sure the means are new and the vocabulary too, but in the end Facebook is not a lot more than the Hula-Hoop of the early 21st century. Web 2.0 technologies tell us far more about the constancy of human nature and the predisposition to conform, follow the crowd, and prefer to be insiders rather than outsiders, than it does about how behaviour, let alone human nature, is changing.

When we turn to the cloud, to location-based services, the internet of things, the one thing we do not see is some entirely new set of business practices. Far from it! The business models, pricing models and marketing models are all very familiar ones (for example, pay-per-use, service drag, outsourcing cost by free riding on the communications network or crowd-sourcing software).

Surprisingly, or perhaps not so surprisingly, just going to look never seems to be the obvious thing to do for the protagonists of Cultural Sociology. For them, the issues are not actually empirical but conceptual. Here is Beer again.

> *The prominent new media theorist Scott Lash (2007b) has recently spoken of what he describes as a 'new new media ontology'. This is a term designed to capture a shift toward forms of living in which information becomes active in shaping lifestyles and environments. What is useful about this slightly oblique terminology is that it can be used to group together a range of emergent work in the social sciences, and particularly in urban studies, that picks up on the technological challenges to human agency offered by the decision-making powers of established and emergent software algorithms. (Beer 2009 p 988)*

Beer goes on to quote Lash as follows.

> *What may be happening in the information order is such a collapse of ontology and epistemology. Ontology itself is increasingly epistemological. And of course the notion of information implies this. What else could informational being be? But equally epistemological or modes of knowing are increasingly also modes of being. Being always necessarily shifts over into modes of classification. (Lash 2006: 581)*

So it is not a matter of different things being done but rather of our need to talk about them differently. We have now to talk like this:

> *… the 'stuff' that makes up the social and urban fabric has changed – it is no longer just about emergent properties that derive from a complex of social associations and interactions. These associations and interactions are now not only mediated by software and code they are becoming constituted by it. (Lash 2007 emphasis in original)*

Just in case we missed it, Beer glosses Lash like this:

> *The shift that Lash is intimating, and which is being picked up on across a variety of contemporary new media work ..... is toward information*

> *becoming a part of how we live, a part of our being, a part of how we do things, the way we are treated, the things we encounter, our way of life. The result is that information is not only about how we understand the world, it is also active in constructing it. (Beer Op Cit. p987-8)*

All this, though, simply creates a puzzle. Beer began (and indeed ends) by saying we know absolutely nothing about Web 2.0 technologies and what they are doing to us. Our methods and research strategies are inadequate to address them. And yet what we are offered looks remarkably like an empirical generalisation about the real-world effects of these technologies culled from a body of investigations. It looks like a conclusion. But of course it isn't. It is a stipulation. We are not being told that Lash, Beer et al have studied these technologies and found them to be having this or that effect. Rather, Beer is telling us to see them this way and then go out and carry out the studies he recommends to show just how they are like that.[35] It is this stipulative character which then sets the negative tone for the accounts that are to be offered. Because they constitute our worlds and are ubiquitous but hidden, they must be controlling. That is, they must be an exercise of power, a new kind of power, one that Lash calls post-hegemonic. What remains unclear in all of this is just what the shift from seeing technologies as tools for assisting our understanding of the world to seeing them as playing an active role in the construction of that world actually is.

New Concepts for Old Problems

As a body of sociological work, Cultural Sociology rests upon Critical Theory. Although by no means integrated, homogeneous or even harmonious, Critical Theory does acknowledge the same lines of descent; on the one hand, from the Frankfurt School (and particularly Adorno, Marcuse, Horkheimer, Benjamin and latterly Habermas) and on the other from Michel Foucault.[36] A third thread concerns the importance of postmodernism as a social process, but this is by no means as universally acknowledged. For the Frankfurt School, the key question was why, despite the fact that exploitation and domination were evident all around, the exploitative character of modern capitalism had not led to its overthrow. Their answer was that the ideology of capitalism is now part of the core beliefs of our society, shared by all and continuously reinforced through political processes such as elections and parliaments as well as cultural processes such as forms of art and music, mass media and so on. Even forms of academic philosophy (especially Heidegger's philosophy) were subjected to this critique. Power relations, then, are immanent in cultural forms.

For Foucault, what was even more important was that the immanence of power lay in the social institutions within which we operate; the structuring of knowledge within these institutions produces and reproduces the distribution of power. For The Frankfurt School power is expressed through what we believe; for Foucault, power is expressed in all forms of knowledge. Both views adopt the notion of 'hegemony' from Gramsci (Gramsci 1996). Hegemony is the power to control by allowing the subjected group to control themselves. For Cultural Sociology, the motif of hegemony motivates all explanations and descriptions. Accounts of ways of life in the modern city, fashion, youth culture, consumption, brands and marketing, leisure activities and travel, etc etc are cast as depictions of the operation of hegemony. Each is an instantiation of how we, the masses, are voluntarily brought to subject ourselves to the demands of capitalism for ever new mechanisms for expropriating value.

For Cultural Sociology, power is not just an another analytic category: it is the universal explanans. Power is not *found* in cultural objects and processes, it constitutes them. The trick is to show the hegemonic nature of this power.

Knowledge, understanding and the conceptual Three Card trick

[35] As we will see, the list of studies he proposes even if they are a little uninspiring, are not that bad,.
[36] See Jay (1996) for the early history of the Frankfurt School and McCarthy (1990) for Foucault and The Frankfurt School

In his account of the significance of digital technology and its relationship to post-hegemonic power, Scott Lash (2001) begins with what is a commonplace in the Sociology of Knowledge. At particular junctures, often related to specific scientific or technological breakthroughs, particular images seem to grip the public imagination. Thus from the 16th to the 19th century, accounts invoking mechanical mechanisms and relationships were routinely used to describe non-mechanical phenomena. The success of Physics in explaining (or seeming to explain) the physical world led in the social and related sciences to reasoning by analogy with physical accounts. In the 19th century, following Darwin, biological images came to predominate and the forces at work in social life were expressed through evolutionary metaphors. For Lash, Sociology from its modern formation well into the 20th century, deployed this biological formulation (for example, Durkheim's contrast of 'mechanical' and 'organic' solidarity; Parson's use of systems theory).

Into this mix, Lash now drops a *philosophical* distinction between ways of understanding the material and social world around us. This is between a concern with what he calls the 'logical meaning' of things and their 'experiential meaning'. He calls this the contrast between epistemological and ontological understanding. These two forms of philosophical understanding are then mapped onto how 'we' (presumably 'we' the general populace) understand things. Rather than understanding things from 'above' society (the epistemological stance), we now understand things from within social life (the ontological stance).

> *Through no longer being above things but in the world with things, we come to grips, not with epistemology and appearances, but with deeper ontological concerns. (Lash Op. Cit. p 107)*

This is a deeply odd conclusion to arrive at. Up to this point, Lash's argument has been about the ways Sociology represents the world and our ways of thinking about it. Its concern is entirely intra-sociological, if we might be allowed to use that term. And, as we say, it is not an unusual argument. But now these sociological conceptions are read (or imposed, if you prefer) onto ordinary life. So it is not sociologists who have changed their ways of looking at the social world but we, the ordinary members of society. We have moved from an outside-in modality of understanding to an internal one. It is we who have moved from a concern with appearances to a concern for experience. Thus, from a *conceptual* argument, we jump to an *empirical* conclusion. From an argument about how social theories have talked about social life and ways of thinking differently, we are offered a conclusion about how ordinary members of society understand these things. And with that conclusion in hand, Lash turns to the significance of modern digital technology.

It is worth dwelling on the move that Lash makes here because it underpins both his conclusions about modern technologies as well as the uses which Michael Beer makes of his ideas. Whilst not uncontentious, Lash's potted history of social thought is a relatively familiar one (it has the same themes as those of Latour, for example). The thread running through it, of course, is the philosophical frame within which Sociology was located. Mechanical and organic forms of social theorising are to be seen as 'positivist' and concerned with the grounding knowledge in the relationship between appearance and reality. It was the introduction of a phenomenological frame into social theory that introduced the concern to ground knowledge in experience. The themes and contrasts that Lash runs are all forms of philosophising. That is, they are formal ways of reflecting upon how we should conceive the world around us. Neither positivist nor phenomenological philosophies say anything about how ordinary people either do or should reason about the world. They are about how Philosophy should be done. They are about *formal* not *commonsense* understandings of the world and certainly neither provides an empirically based description of how commonsense understandings are arrived at. What Lash does is convert formal, philosophical accounts of understanding into purportedly empirical descriptions of commonsense understanding, and then on the basis of that conversion, proceeds to draw conclusions about the general significance of modern digital technology.

HEGEMONIC POWER AND THE POWER OF THE ALGORITHM

Lash sets things up by proposing that 'in technological forms of life, we make sense of the world through technological systems' (p. 107). He explainss what he means by this as follows:

> *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 technological culture. And technological culture is constitutively culture at a distance. Forms of life become forms of life-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. (Lash Op. Cit. p 107-8)*

Now Lash is not describing some idiosyncratic way which he just happens to have adapted to modern social life. He is proposing what it is like for all of us. But what on earth is all this supposed to mean? That we can no longer socialise with family and friends over dinner or in the pub? That we cannot go about the daily tasks of bringing up children, running household errands and doing domestic chores, buying goods and services without operating through some 'machine interface'? Really? Of course we know that email, mobile phones, internet shopping, social networking sites and the rest are important features of our lives, but no-one wants to propose (do they?) that we only live our lives through such applications? Of course, Lash doesn't really think this. His rhetoric is meant to elide the ways that social science has construed social life and how, as a consequence, we must accept social life is lived.

This working back from sociological theorisation to empirical description occurs in all three of the core characteristics which Lash attributes to technological forms of life: *flattening*, *non-linearity*, and *lifting out*. In each case, Lash reviews the commentaries theorists have offered about social life and treats them as empirical descriptions of the character of social life and social institutions. The net result is the usual smorgasbord of topics which Cultural Sociology has taken for itself: mass media, brands, trademarks, intellectual property, e-commerce and so on, all reinvented as modes of a technological form of life.

It is within this context that Lash introduces power. In a technological form of life

> *...Power works less through linearity and the reflective argument of discourse (or for that matter the linearity of ideology), than through the immediacy of information, of communications (Lash 2001 p.117)*

And if power works in this way, then it can no longer be conceived to be hegemonic. Once again we get a reading of social life through the lens of Cultural Theory played back to us as an empirical description. Cultural Theory has only partly grappled with the issues. For Lash

> *...At stake here is not just technological forms of life (Lash, 2002), in which forms of social life are technologically mediated. At stake is the technologization of life itself, the mediatization of life itself. Once we make the step from computing or technology to media, the question of content also comes to take centre stage, as does that of communication. When media are ubiquitous, interfaces are everywhere. The actual becomes an interface. People and other interfaces are connected by protocols that connect an ever-greater variety of interfaces with one another. It is such protocols that make communication possible. (Lash 2007 p. 70)*

Since we are now talking about digital media, it is digital coding, programming and algorithms, that become the object of attention. With his usual penchant for mixing up concepts, Lash adds the mathematical concept of an algorithm to the legal concepts of regulative and stipulative rules. It is through the algorithmic, generative rules which are the mechanism through which modern capitalism exercises non-hegemonic power. For it is the operation of the algorithms underlying digital technology and modern media which create what the late Roger Silverstone (2007) calls a 'doubling' effect. Because experience is held to be increasingly mediated though digital technologies and their media alone, these systems both present the material and social worlds to us *and* construct their facticity for us. For Lash, constructing the facticity of the world is non-hegemonic power. Here is his (revealing) summary.

> *Why is this second-wave cultural studies, this post-hegemonic cultural studies so suggestive to today's generation of students? Because it speaks to the world that they encounter. If the empirical is informational, then it is already knowledge: it is already transcendental. If the empirical we encounter is mediatized, then it is already transcendental.....Second-wave cultural studies and its transcendental empiricism speaks to us because we encounter a world of transcendental–empiricals. Thus science encounters a world of bio-media. And art deals in (video and information) materials that are already mediated in addressing a transcendental that is equally mediatized. And in all these cases it is a question of ontology and epistemology. Being is mediatized, as is knowledge. And the two stand less in a relation of radical separation than of fusion. (Lash 2007 p74)*

In the end, the justification for the use of a conceptual pot-pourri buttressed by logical leaps is not that we get firmer sociological ground on which to understand the social world and its institutions. It rather that our students find it attractive and that 'it speaks' to their experience. It is this justification which led to our earlier suggestion that Cultural Theory is taking on the characteristics of the consumer society it so criticises. Sociological theories are to be prized as consumer objects which our students like and which re-describe in high-sounding terms what they already know.

Back to Michael Beer

Beer roundly castigates Sociology in general for failing to address modern digital technologies. Taking Lash's account of technological forms of life and post-hegemonic power as his departure point, he suggests a research programme which operates at a number of different levels.

1. Which organisations own, control and create the applications and services that deploy these technologies? What are their business models? How successful are they? What are the supply chains that get set up to support the applications? This you might think of as the Management Science of the modern web.
2. What are the product architectures, the data architectures and data flows that are deployed in these applications? What information is harvested, re-purposed and re-deployed, and how is this done? To continue our analogy, this you might think of as the Socio-Technical Systems Theory of the modern web.
3. Finally, how do the technologies and their interrelationships appear and get used in daily life? What do people do with them? What do they share (and not share)? How do they tailor and adapt the technologies? How do they manage to traverse the line between the real and the virtual (assuming there is a distinction to be held and a line to be crossed)? What do these technologies mean in their daily lives? And so on. Think of this as the Social Anthropology of the modern web

As Beer clearly recognises, these questions do not circumscribe the whole gamut of sociological research interests. But he sees it as a start. The only trouble is for at least the last 25 years, sociologists have been taking a keen interest in just these questions and in many, many more. It is true that they have not paid the same degree of attention to every part of the programme Beer outlines. By and large they have been more interested in 3 and its affiliates than the others. But it would not be right to say that since nothing has been going on, a start must be made. One has only to explore fields such as HCI and CSCW, Business Studies and so on to see just how much has been achieved. Moreover, and this is the irony, a great deal of the work that has been done has called directly upon the theoretical frameworks developed in Cultural Sociology. As we saw in Essay 1, whole conferences and journal issues have been given over to debates on the relevance of (some version of) Heidegger, Bahktin, Foucault, Baudrillard and Bourdieu. The analytic skein of culture, brands and consumption spun by Cultural Sociology has been invoked and used in account after account, paper after paper. Beer might not like what is being done with the impedimenta of Cultural Sociology but it is a bit much to ignore the fact that it is actively going on.

In turning to Web 2.0 technologies, Beer repeats the canard that the core technologies are hidden, beyond reach, and, most importantly, inscrutable to extant social science methods. This is despite the fact that, as we shall see in Essay 8, many investigators have provided detailed accounts of how they work. However, why *a technology* should automatically be open to social science scrutiny (as opposed the technology's socially organised characteristics and consequences) remains a mystery. As we will see with Winner's account of bridges and nuclear power in the next Essay, it is not necessary to have a detailed understanding of the technology to understand its consequences (even if you do get them wrong).

What Beer sees happening with Web 2.0 technologies and especially the profiling processes they facilitate, is a supposed transfer of agency to the software itself. This is because:

i. The profiles created are used to generate social sorting;
ii. This sorting allows personalised recommendations.

The system 'knows' lots about us and on the basis of its knowledge, goes on to facilitate data 'finding' its way to us. Second, the extensive detail provided to these sites by users actually allows the "doubling"' process to occur.

Taking the issue of agency first. Talk about software making decisions is, of course, just a *façon de parler*. What the algorithms do is manage logic gates to allow the processing of data according to the models and procedures which have been built into them. The methods for doing this are those chosen by the software designers. The program may indeed 'learn' as it does this processing but such learning is, once again, simply the application of criteria of goodness of fit between different representations of data which have been provided in the design and as such part of the functionality of the 'system'. Although the decisions they make may not have been predicted or even predictable, programs have no agency, no motivation, no intentionality, and no understanding of what they are doing. When used informally by software designers and commentators, talking as if they act to make decisions is a relatively harmless trope. Used as an analytic social science description is, at best, a serious misapprehension.

As for the sorting itself, this is very little different (except of course for the scale and range of detail) from the hand crafted analyses that social scientists, marketing analysts and others have traditionally used to summarise the heaps of data they have collected from focus groups, questionnaires, customer feedback and so forth. Principal components analysis is used to partition the data into a few relatively manageable clumps. The integrity of the clumps is tested for cohesiveness and differences between the clumps are tested for their 'relative distance' from one another. The profiling techniques of web 2.0 technologies are simply larger scale versions of these processes. No-one has gone around bemoaning the use of profiling in targeted snail mailing

(except to complain about the volume of junk mail they get), or the way traditional retailers track and manage their customer relations. The scale of data collected through the internet makes no essential difference.[37]

The second issue, that of 'doubling', is held to be a consequence of the role which digital media have in the transition from modern industrial society to what is called "post-modern" society. This is quintessentially one from urbanised to globalised social formations. In the emerging digital economy, not only will the products and services offered be developed globally, the markets for them will be global too. The digital economy is, then, globalised through and through. The challenge in the globalising of political culture through the digital economy is one of possible fragmentation. Modernism is held to have a homogenous social imaginary (to use Charles Taylor's (2004) term). However, it is by no means clear that postmodern society will share a universalised political culture based on that of western societies. Across the globe, political cultures could well be aligning around multiple and complex lines; ethnic, religious, regional, as well as around nation states. In addition, even within western societies, the supposed coherence of the modernist political culture may be under threat.[38]

Reflecting on these processes, commentators such as Roger Silverstone (2007), have begun to talk of *mediapolis* as the locale of the diverse political cultures in the global public realm. In *mediapolis*, our experience of the world is channelled through a merged set of communications media rather than through local communities and the institutional intermediaries of modernist society. *Mediapolis* is what Taylor calls an "open access society". In this context, it becomes important to know how likely it is that the common platform of communications technologies will shape either a shared or a diversified political culture. Will that platform predispose integration or even further fragmentation as, paradoxically, global society emerges as a constellation of minority communities?

Two concepts are held to be central to answering these questions: *the space of appearances* and *doubling*. The former refers to the physical (and increasingly digital) and cultural space of experience. Things and people appear for us in this space. Where this space is rooted purely in physical space, the directly personal, known and co-present (within local communities in mostly pre-modern societies), the culture that we are immersed in provides ways for us to understand and respond to what we experience. In the globalised *mediapolis*, such people and events may be physically and culturally far from us and encountered virtually and asynchronously. As a consequence, the assumption of a common basis for understanding, interpreting and responding to events may no longer hold, indeed may no longer be an assumption which *anyone* actually holds..

The world of experience within *mediapolis* will be both a familiar and an unfamiliar one. Currently, when we encounter the unfamiliar, the strange, we can call on the resources of our common culture to translate the unfamiliar into the familiar. To illustrate this, Silverstone recounts an anecdote based upon an interview broadcast on the BBC where an Afghani blacksmith suggested that the Americans were bombing his country because Al Queda had killed many Americans and their donkeys and had destroyed some of their castles. Quaint though this might be, it does bring out the proposed general problem and its consequent strategy of translation.[39] For analysts such as Silverstone, through the ways that they routinely present events to us, communications technologies predispose certain orders of translation and familiarisation. The unfamiliar is shaped to become the familiar. This familiarisation comes, however, at the price of a loss of appreciation, and possibly respect, for difference. The result is likely to be increased fragmentation and social distance.[40]

---

[37] We return to the issue of the supposed troubling nature of digital technologies in the next essay.
[38] See the Postscript to this volume
[39] of course, its quaintness is the reason why Silverstone uses it. One may well doubt it describes the kind of account those who share a digital culture would use.
[40] Once again notice how we have moved from an anecdote to a generalisation about the monolithic and homogeneous nature of the media and global culture.

For these theorists, then, the communications media through which we increasingly encounter other cultures, people and events have a *double role*. They both present events and people as 'facts in the world' and, through the ways these facts are shaped and contextualised, they construct their 'factuality'; that is, what we take them to mean. Without such doubling, the globalised world would appear irredeemably strange, perplexing and dangerous. Within traditional, localised communities, continuity of co-presence, the fact that all live in a common welter of daily life, underpins a commonality of outlook which in turn enforces the boundaries of normative order. For Silverstone, this is what secured the Greek *polis* and its democratic structure. As we move away from experience rooted in co-presence towards mediated experience of globalised digital worlds, the commonality of outlook dissolves and hence normative boundaries are at risk.[41] For Silverstone, through their doubling, the media have the power to create a new normative order for globalised experience, one which might be either universal and integrative or local and fragmented. This power to close the political choices on offer is what, in his eyes, makes the media irredeemably moral.

For "doubling" both to occur and be the threat that Beer and Silverstone believe it is, one has first to presume that the user (notice the type) of these technologies lives outside what we currently take to be normal social relations. Not just some but *all* their experience is channelled through the technology. Maybe some social recluses might live like this, but it is hard to imagine a *whole* society like this. Moreover, given what we said earlier about Facebook etc, even when these forms of networking are large scale, the social forms that appear are the familiar ones from the our co-present experience. We are enmeshed in networks of social relations that flow in, through and around technologies of all kinds. And our commonsense cultures and shared expectations serve as grounding for our understanding of social life. To imagine a society made up of the kind of atomised and anomic individuals envisaged by Beer et al is simply scaremongering. Our understanding of the world around us is grounded in the culture we share and so is our use of the technologies we deploy.

CONCLUSION

Within Cultural Sociology, the influence of postmodernism has replaced the old certainties of investigation and analysis with the new certainties of stipulation and critique. The critique takes the form of a supposed revelatory discourse which re-run the stories publicised in the mass media and in which the enmeshing of cultural forms in power relations is the explanans rather than the explanandum. This hyperbole offers descriptions of social activities which bear almost no relation to the ways that, as ordinary members of society, we experience and carry them out. The case of Web 2.0 technologies is but the latest example of this, but a particularly telling one. These technologies are the technologies of the young; and so our sociological account of them must be shaped to fit their preconceptions and predispositions. Cultural Sociology is the Sociology of and for Generation X. The irony is that is seeking to be so *a la mode* and relevant, Cultural Sociology has itself become a packaged, post-modern product which justifies its place in the marketplace of ideas by its attractiveness and familiarity to its consumers. Academic rigour, structured thinking, close reasoning have been dispensed with and replaced by the pursuit of the new and the whim of fashion

[41] This amounts to no more than a modern rendering of Durkheim's classic counterposing of 'organic' and 'mechanical' solidarity.