

Anthropomorphism and the Computer “Virus”: The Latest Chapter in the Illness as Metaphor Story? – A Postscript

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Returning now almost two decades later to this MSN piece, my abiding impression is that what at the time felt like something genuinely new, intriguing and hence worth writing about is now such a banal or commonplace feature of life and living today in the information age that is barely merits mention and is certainly no 'news' at all!

The following points nevertheless are worth stressing as an 'update' of sorts on my thinking here in the intervening years.

First and foremost, to these 'viral' computer threats I was first writing about in 1995, we must now of course add, as part and parcel of contemporary risk culture and society (cf. Beck 1992: Giddens 1991), not simply constant updates to our 'anti-viral' software, but a number of other new digital risks and threats, given rapid developments in information and communication technologies since this time, including the advent of Web 2.0 and the proliferation of social media. Digital risks and threats, that is to say, such as online 'flaming', 'trolling' and 'phishing', and countless other issues to do with so-called 'cybersecurity' and surveillance in the twenty-first century. Consider, for example, the RCUK 'Global Uncertainties: Security for all in a Changing World' programme, led by the ESRC, where cybersecurity features as one of six core areas. 'Our increased reliance on electronic systems', we are told:

...means that successful cyber attacks are likely to have significant damaging consequences. The combination of enhanced threats, increased vulnerabilities and more serious consequences increases the cyber risk to which we are all exposed.

Hence the need, RCUK continues, for 'interdisciplinary research' in order to 'achieve more effective cyber security and to help develop new mitigations.' (<http://www.globaluncertainties.org.uk/research/cybersecurity>, accessed 10/2/2014).

As for the mega amounts of data all this digital activity generates, what to make of it, and what is done with it, well that of course now goes by the name of 'Big Data': something I shall not elaborate on any further here in this postscript, but see Uprichard (2013) for a recent excellent discussion in the equally excellent new 'Discover Society' online magazine, which I recommend all MSN readers to read regularly if not already doing so. (<http://www.discover society.org/focus-big-data-little-questions>)

A second closely related point returns us to the long standing debate about the relationship between medical sociology and mainstream sociological theory, this time albeit in the guise of the so-called 'information age'. Despite numerous bridges now forged between medical sociology and mainstream sociological theory, one theorist, as I have recently argued elsewhere (Williams 2012), is notable by his absence, namely, the sociologist par excellence of the 'information age', Manuel Castells. This indeed becomes all the more curious given the growth of interest in medical sociology in recent years in the digitalisation and informationalisation of medicine, health and society (Webster 2007, Miah and Rich 2007, Nettleton 2004, Seale 2003). Castells indeed has much to offer us here, in my view, from his

early formulations of these matters in volumes I, II and III of the information age (Castells 2000, 2010a,b), to his more recent work on 'communication power' and the 'real virtuality' of the digital world today (Castells 2009).

A third, quite literally 'vital' matter, concerns the fact the despite the computerisation and digitalisation of almost everything today, we now live not simply in an 'information age' but a 'biological age'. A biological age, that is to say, given significant advances in bioscience, biomedicine and biotechnology in recent decades; advances indeed which are fundamentally reconfiguring prevailing notions of normality and abnormality, health and illness, therapy and enhancement. A biological age, moreover, where computer models and metaphors of digital minds and the brain as an isolated 'information processor' are now increasingly problematised in favour not simply of embodied but extend minds, social brains, neuroplasticity and so forth. And a biological age where, as Rose (2007: 20) tellingly remarks, the 'artificially enhanced body is no longer a cyborg.' No longer a cyborg, in the sense that many forms of enhancement today do not so much seek to 'hybridise' the body in human-machine like ways that Haraway's (1990) cyborg manifesto suggests, but in ways that render us not 'less' but 'all the more' biological, including organic 'transformations' of the vital 'nomativities' of life itself (Rose 2007: 21). To Turner's (1992) notion of the 'somatic society' therefore, perhaps we might profitably update this still further in terms not simply of moves in the direction of new more complex, open, post-genomic, pro-social forms of biology now, but of the increasingly 'biosocial' ways in which we are coming to 'know' and 'govern' ourselves today. Somatic societies in this sense then, we might say, are 'biosocieties' through and through (see for example, Rose 2007; Rabinow 2008, 1996/1992; Gibbon and Novas 2008).

A final point concerns future agendas in these digital domains. Clearly there is much still to do here, in medical sociology and beyond, including further empirical work on what Nettleton (2004) appositely terms 'e-scaped medicine' in the information age. Perhaps one of the most exciting if not cutting edge digital developments here however, in my view, concerns the advent of so-called 'm-health' as part of parcel of these wider e-health developments on the one hand, and the so-called quantified self (QS) movement on the other hand. The 'm' in question here, of course, stands for 'mobile', as in the multiple ways we can now monitor and manage our bodies and ourselves on the move, so to speak, courtesy of digital apps, health related or otherwise, for our smart phones, tablets, laptops and so on - see Lupton (2013, 2012), for example, for a recent sociological discussion of these developments within and beyond the health domain. Take sleep for instance, another key sociological and political matter in my view, as I have argued extensively elsewhere (Williams 2011, 2005). A variety of apps are now available to monitor and manage if not improve or optimise our sleep, including some approved sleep apps in the new NHS health apps library: a case of the 'm-apping' of sleep in the digital age, in effect. To date, however, there has been precious little sociological research on these issues, in medical sociology or elsewhere. Hence many sociological questions and issues remain to be addressed here in the coming decades, from further studies tracing the design and development of such apps to their multiple meanings and uses in every day/night life, and the wider issues of power, privacy and surveillance they raise.

Perhaps then it might be instructive to revisit this postscript in another few decades or so, assuming I am still alive by then, to see what further progress has been made along these sorts of lines in the interim, and hence how up-to-date or out-of-date these further musings of mine are by then. Time will tell...

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In this world of uncertain times one thing remains clear: namely, that when you are in a hurry things invariably go wrong! So it was one busy Wednesday in January when, sandwiched between my morning and afternoon teaching sessions, I tried to transfer some files from one Computer to another. All of a sudden, and much to my embarrassment, an ominous alarm signal started to emanate from the PC I was using and broadcasting to all and sundry that something terrible had gone wrong. A message flashed up on the screen notifying me that a computer 'virus' had been detected and that I should close down the PC and seek help. Somewhat bewildered and perplexed, I consulted a colleague who told me that the best thing to do was to go straight over to the computer centre where somebody would be able to help me.

It was from this point on that suddenly, in the midst of a plethora of high-tech computer terminology and acronyms such as RAM, ROM, VDU, I found myself plunged into the ready-to-hand vocabulary of illness which was being used to describe my plight: one in which the guiding scheme of imagery was of 'contamination' and of sexually transmitted disease. Indeed, to my surprise I subsequently found out that some of these viruses do actually have names related to HIV, AIDS and other STDs.

From here, it was only a small step to being ineluctably drawn into a whole new set of issues, and it is these I wish to recount in this short article. First, crucial existential questions such as 'Why me?' and 'Where did it come from?' suddenly come to the fore. Here the search for reasons resonates with the search for meaning in the context of (chronic) illness. Moreover, this also involved me having to try and 'trace contacts' in a similar manner to the practices of genito-urinary clinics, and was further reinforced by the necessity of having to fill out a form reporting the incident to the computer crimes department of New Scotland Yard!

Secondly, the upshot of this is that your PC, to which you may have become quite attached - after all, it is your personal computer - has suddenly become 'infected'. In other words it is 'sick', and this may spill over, however irrationally, into more generalised feelings of physical and moral 'contamination'. As a consequence, feelings of guilt and shame tend to be invoked: you don't really want to broadcast the fact that you've caught a 'virus' especially when you find out it is from your 'partner'!

From this flows the third issue: namely that you, are now at risk of giving the 'virus' to others, particularly if you engage in 'high risk' practices such as 'irresponsible' or 'reckless' 'disk-swapping'! Similarly other people, such as the editors of Medical Sociology News, who have 'multiple contacts' with a variety of sources, are at particular risk of 'contracting' the 'virus' *ergo* please remember to check your disks are 'virus free' before sending them to us in future!

Finally, having 'contracted' the 'virus', there is, of course, the whole ritual process of 'decontamination' or 'disinfection' terms which are actually used in the anti-virus packages – which one has to go through and which involve reporting to a professional 'expert' who then 'diagnoses' which particular 'strain' of the virus you have and how to go about treating it. Inevitably, if somewhat ironically, in the light of the imagery which this conjures up, these rituals of 'decontamination' do actually result in a feeling of 'purification' and 'cleanliness' once they have been performed. Moreover, a similar feeling of 'moral purity' and 'virtue' may also emerge when a quick 'diagnostic test' indicates that your PC is 'virus free'.

What then, are the morals of this story? Able to reflect on this experience now with somewhat more equanimity than at the time, I think the following points and issues emerge.

First, as symbolic and structuralist anthropologists have demonstrated, humans find the body 'good to think with' (Schepper-Hughes and Lock 1987). Thus Mary Douglas (1973), for example, has ably documented how the body is a natural symbol and treasure trove from which spring some of our richest metaphors and cultural constructions of society and social relations. In this respect, if we take O'Neill's (1985) point seriously that human beings cannot do without the practice of anthropomorphizing aspects of their world, then the attribution of a 'virus' to what is in effect an inanimate, impersonal object, namely our PCs, represents the latest twist to this tale. Indeed, as media coverage has recently highlighted, those who download pornographic material on their PCs are now at risk of catching a particularly nasty new strain of computer virus, designed by some moralizing 'hacker'.

The situation becomes even more complicated when we realise that, as we approach the twenty-first century, not only have we come to conceptualise computers in bodily terms, but also the body in computerised terms. In this respect a dialectical interplay of metaphorical projections and schemes of imagery is set in motion with potentially disturbing consequences. Not only do computers 'catch' viruses, they also possess 'memories' (Lupton 1994). Moreover, they 'think' and 'process' vast quantities of information much faster than we ourselves can. Indeed, humans are liable to error, computers aren't - the only errors which computers make are programmed in by humans. Despite this fact, humans have increasingly been depicted as 'organic computers' and the mind has been 'bureaucratized' (Berman 1989). Within this scheme of imagery, bodies become cyborgs, whilst diseases are viewed as the result of malfunctions in information processing or 'communications pathology' (Haraway 1991). This is particularly so with respect to work on the human brain. Thus Lupton for example, cites an article by Young and Concar (1992) in *New Scientist* in which the human brain is referred to according to its 'information storing capacities', its 'memory's hardware', its 'internal filing system', 'the machinery that enables us to retain a sequence of digits, letters or words', 'electrical impulses', 'fine tuning connections between neurons' and 'memory networks' (Lupton 1994: 60).

These processes have been extended even further with the discovery of DNA and the current project of 'mapping' the structure and sequence of genetic material in the human genome. This results in an image of the body and mind as 'machine-like "systems" that can be visualized on a computer screen and understood simply by deciphering a code' (Nelkin and Tancredi 1989: 15, quoted in Lupton 1994: 60). As a consequence, individuals are in danger of being reduced to their DNA codes (Lippman 1992) and the machine-metaphor of the human body is further reinforced albeit in a manner which Descartes himself way back in the seventeenth century could not have envisaged!

Indeed, as Frank has recently remarked, the Baudrillardian nightmare has arrived in the modern hospital. In this respect, if the modern hospital was to have an emblem it would have to be the video screen rather than the patient's body (Frank 1992). In other words, this is a

situation in which the Foucauldian clinical gaze has given way to the 'hyperreality of images without grounding' (Frank, 1992: 84). Instead of the patient's body being at the centre of medical practice and discourse, we find instead 'multiple images and codings' through the use of a wide range of sophisticated medical technology (e.g. the ultrasound screens, CAT scans, ECG monitors etc...) whereby the body is 'doubled and redoubled'; a scenario in which the reality is that there is no reality, rather the real simply disappears in an endless chain of self-referential images or simulacra.

At a more general level, the changes sweeping through society as a consequence of information technology have profound implications for the nature of our embodiment and the shape of our future lives. In particular, they suggest a trend towards the 'dis-embodiment' or 'de-corporealisation' of contemporary culture. Thus, the absurdity of the statement: 'I'm here but I've left my body behind' becomes a chilling reality with the advent of cyberspace and virtual reality. Within this no-(wo)man's-land not only do bodies and communities assume a virtual status, but the nature of working life and leisure opportunities becomes profoundly and irrevocably transformed. In short, contrary to the current emphasis upon the body and self identity in modern western societies (i.e. what Turner (1992) terms the 'somatic society'), it is possible to envisage an alternative hypothesis or a counter-trend for the future involving what might be termed, for want of a better phrase, the 'decorporealisation' or 'dis-embodiment' of contemporary culture. Perhaps the fullest expression of this disdain for the body comes from Foster (1993), who quotes approvingly the character Plughead in Steven Lovy's 1989 film *Circuitry Man*, who states 'Why jack off when you can jack in?' (1993: 11). In other words, why remain dependent on an organic body when access to the extended nervous system of a computer network is available?

Secondly, this tale again highlights the ways in which the language of illness is imbued with moral and metaphorical qualities which serve to transform, often in a negative manner, the meaning of personal affliction. In this respect Sontag's (1989) recent book serves to extend her critique of the metaphorical nature of TB and cancer to the metaphors and dread surrounding the AIDS virus. In particular, the following passage echoes the points I have sought to develop here:

And the strictures about contact now have their place in the computer world as well. Computer users are advised to regard each new piece of software as a "potential carrier" of a Virus. "Never put a disk in your computer without verifying its source". The so-called vaccine programs being marketed are said to offer some protection; but the only sure way to curb the threat of computer viruses, experts agree, is not to share programs and data (Sontag 1991: 165).

Doubtless medical sociologists are acutely aware of the dangers of moralising about disease and of the need to strip away the mythology and negative connotations which surrounds certain illness conditions. Yet one has to fight very hard in order to avoid becoming sucked into such discourses. This, in turn, poses the obvious next question: namely, would the use of a different vocabulary to describe the problems I confronted on my PC have altered my experience and interpretation of these events or happenings: I think the answer is, undoubtedly, yes. And yet it is also clear that the argument about stripping illness of its metaphorical garb is also a hollow one. As Johnson (1987) has cogently argued, the use of metaphorical projections and schemes of imagery which are intimately tied to our embodiment, is a fundamental aspect of human language, meaning and rationality. And whilst we're on the topic of metaphor, have you noticed the 'number' of bodies which currently litter the pages of academic journals and texts; the list grows longer every day! Thus we have 'anatomical' bodies, 'biochemical' bodies, 'psychosomatic' bodies, 'genetic' bodies, 'sick' bodies, 'disabled' bodies, 'holistic' bodies, 'docile' bodies, 'reflexive bodies',

'risky' bodies, 'panic' bodies, 'uncertain' bodies, 'sexual' bodies, 'virtual' bodies, 'cyber' bodies, 'social' bodies, the body 'politic', 'celestial' bodies, and any other body you care to mention. In truth of course, these are simply *aspects* of our embodiment, rather than 'bodies' in their own right, and this endless doubling and redoubling of the body is nothing other than a playful 'language game' to borrow Wittgenstein's famous phrase.

Thirdly, whilst the cyborg may, according to Haraway (1989), offer the possibility of a 'post-gender world' and exposes a series of 'leaky distinctions' between nature, biology and culture (Haraway 1991), it is nonetheless the case that, computers, just like humans, can also become (metaphorically) 'sick'. Moreover, machines may not totally escape gender categorisation and stereotyping, as the 'gendering' of certain computer parts testifies. Thus, plugs with 'prongs', for example, are termed 'male', whilst sockets are referred to as 'female'. Indeed, as writers such as Foster (1993) and Cherniavsky (1993) suggest, cyborgs and the cyberpunk genre actually upholds the gendered embodiment and subjectivity it seems to unravel, and technology is in fact patterned upon a 'fethisation' of the maternal body (Doane 1990). Within this context a dualism is resurrected in which a disdain for the (female) body as a 'meat puppet' is matched by a quest for the 'disembodied' (male) mind lodged in the 'ecstasy' of Cyberspace.

Fourthly, on a more pragmatic note, the sheer inconvenience this episode caused in terms of the time and effort it took to sort out should also be emphasised. Although apparently I had a relatively benign 'stoned boot sector virus' others are far more malicious, bringing your system to its knees and corrupting your data files! No wonder, in high technology, information based society, these viruses are taken so seriously as organisations now face the risk of their data banks being 'wiped clean' over night. The costs are obvious, and New Scotland Yard clearly see this as a new strain of crime of an increasingly troublesome sort.

Finally, perhaps on a slightly more flippant note, this tale adds a totally new, more sinister, meaning to the acronym PC: for now PC not only stands for your personal computer (police constable, politically correct etc...) but also for 'Possibly Contaminated'. Therefore, perhaps the most appropriate, if somewhat troubling, note to finish on is to pose the following series of questions which are likely to get you all rushing to your computer to find the answer and 'protect' yourselves: is your PC 'PC' or is it 'OK?'; are you a 'high risk disk swapper'?; and are you taking the necessary precautions against contracting the 'virus'?

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Anthropomorphism has cropped up as a Christian heresy, particularly prominently with the Audians in third century Syria, but also in fourth century Egypt and tenth century Italy.[10] This often was based on a literal interpretation of Genesis 1:27: "So God created humankind in his image, in the image of God he created them; male and female he created them".[11].^Å The story of "The Hawk and the Nightingale" in Hesiod's Works and Days preceded Aesop's fables by centuries. Collections of linked fables from India, the Jataka Tales and Panchatantra, also employ anthropomorphized animals to illustrate principles of life. Many of the stereotypes of animals that are recognized today, such as the wily fox and the proud lion, can be found in these collections.

