Our Digital Futures: Technology Without Boundaries

An Interview With

STEVE FULLER

STEVE FULLER

HUMANITY 2.0

What it Means to be Human
Past, Present and Future

Joseph Savirimuthu: This Conference is aimed at provoking a debate. It is concerned with the choices and challenges facing us as a society in the wake of affective computing. Your book *Humanity 2.0* caught my eye - I must admit that it has not been an easy read. The book seems packed with complex ideas and the Creation/Descent was fascinating and I do not think I have grasped the nuances. That said, the book seems to ask a question that perhaps Lawyers are themselves asking albeit through a different rhetorical frame: how do you promote social ordering in an environment mediated by communication technologies and innovation? Rather than rehearse the familiar rhetoric surrounding the networked society - you direct your focus on concepts of humanity and intelligent design and even elevate the value of theology. Why?

Steve Fuller: First you need to understand that I take 'theology' quite literally as 'the science of God'. The 'God' in question is Abrahamic, which is to say, in whose image and likeness humans were specifically created. This starting point is meant to stress the artificiality of the world (i.e. it did not simply come about by accident but required a creator) but it's an artifice that we are equipped to understand and extend. So, from a legal standpoint, you might say that I am very much against the idea of 'nature' if used in opposition to 'artifice' because everything of value involves artifice, and the legal question is how to regulate that artifice to do justice to everyone's creative potential. For me, nothing is off-limits to consideration as 'intellectual property' but how one defines the owners, their rights and responsibilities, remains an open question. For example, I am very sympathetic to policies that encourage public ownership of, say, genetic or digital information, with provision for state licensing to groups and individuals who might have a special interest in the development of 'information' in this extended sense. My co-author Veronika Lipinska and I stress this point in the third book in the trilogy associated with 'Humanity 2.0'. It is called *The Proactionary Imperative*, after the transhumanist foil to the precautionary principle. (The book is due out later this year.) To make a long story short, the burden of proof should be on those who would limit or restrict scientific and technological advance, not the other way round. A fundamental principle of how I would like to see 'Humanity 2.0' develop is that whatever godlike powers we possess are tied to our species' uncanny ability to beat the odds when taking risks – no matter how much harm we sustain in the short term, we end up stronger in the long term.

Joseph Savirimuthu: I really like the Proactionary Imperative concept - looking forward to reading this book. Steve, you spend considerable time untangling the neo-Darwinist conception of humanity and intelligent design. Can you tell us something about the reasons for doing this?

Steve Fuller: My original training is in history and philosophy of science, and from that standpoint it is blatantly obvious that a belief in the Abrahamic deity motivated the leaps of faith, overruling of commonsense and disobedience of authority that was required for humans to be capable of acquiring the measure of the entire universe. (That more people with my training don't say such things in public is, to put it all too politely, a testimony to their desire for a quiet life.) Darwin himself began with just such a belief (he came from a distinguished line of Christian dissenters) but was then disillusioned by the empirical record of extinction and brutality in nature. (Atheists ever more have dined out on this bit of his biography as a model of how science can

displace religion, even though in Darwin's own case it simply led to lifelong depression.) This academic point about the motive for science found its way into a US courtroom in 2005, when I was asked testify as an expert witness about whether 'intelligent design theory' (a scientifically updated version of creationism) has any basis in the history of science. The answer is, of course, yes. Moreover, it's not clear that without this Abrahamic motive, the sort of risky, comprehensive science and technology that humanity has increasingly pursued for the past four centuries would make any sense. While science and technology have provided many benefits, they have also exposed us to greater risks and resulted in many harms. If science held mere 'instrumental' value, as so many claim these days, we would be much more preoccupied with ensuring that we get our 'money's worth' from science without having to sustain much loss. (On this the eco-warriors and the bottom-line capitalists might agree.) But science and technology make it their business to court error (i.e. to test the limits of their competence) due to a belief in our ability to overcome it. In this respect, humanity's calling card in the Abrahamic mode is 'Whatever does not kill me makes me stronger'. The trick is that the two uses of 'me' in the aphorism may not refer to the same group of people. This is where the need for individuals to identify with a project that goes beyond their own lifetimes becomes important.

Joseph Savirimuthu: I see much of what you say in the open source culture. Where do you think the institution of law finds itself, in an environment such as ubiquitous computing? There is an emphatic view amongst serious scholars that the system of rules on technology and innovation is rigged in favour of those intent on preserving the power structures. Do you agree?

Steve Fuller: Yes, this is why I draw a strong distinction between *open* and *public* access. The former is simply a euphemism for marketisation, which means that those who already have power are in the best position to gain market advantage in an unprotected trading zone. In contrast, 'public access' requires state control that goes beyond simple market regulation. The state also handicaps the market players, as in the spirit of US-style affirmative action legislation. This is to afford everyone the opportunity to exploit their full capacity – or 'human capital', at the risk of sounding too neo-liberal! I think that the idea of a genetic or digital 'commons' is a Trojan horse concept that basically allows open access activities to pass as if they were public access. If there is no clear role for the state as ultimate owner, licenser and regulator, the commons idea is likely to perpetuate, if not amplify, existing social inequalities. As in the late 19th century, when the doctrine was first popularised as a policy implication of Social Darwinism, *laissez faire* is simply a recipe for a collectively self-administered form of social injustice.

Joseph Savirimuthu: I have never heard anyone regarding the 'commons' idea as a "Trojan horse". Fascinating. Tell us something about the Converging Technologies Agenda. I wonder if this agenda opens up opportunities for capitalism to further exploit data at an individual rather than demographic level?

Steve Fuller: The Converging Technologies Agenda is a science policy initiative that emerged in the first decade of the present century on both sides of the Atlantic, triggered by a 2002 US National Science Foundation report explicitly designed to project a long-term, post-Cold War science policy agenda. Many issues were

addressed in the report, not least the future employment of scientists, but the key idea was that science policy agencies should provide incentives for a range of disciplines – nanotechnology, biotechnology, information science and technology, cognitive science – to work together with the specific aim of 'enhancing' the human condition. This means enabling us to live healthier lives that in turn would allow us to work for more years and survive without costly medical treatment. While this general idea had been around for quite a while (see the history of the Rockefeller Foundation), it acquired salience in light of the fiscal crisis of the welfare state, specifically sky-rocketing pension and healthcare costs for an ageing population. The long-term, politically attractive solution was to attack the problem at its source, namely, by extending human functionality indefinitely. My general view is that this must count as one of the smartest government-based science policy proposals ever. However, the devil is in the details, especially given that at the same time, the state has been ceding more of its spending and even oversight authority to 'the market', which means financially powerful players. Thus, the main beneficiaries of the converging technologies agenda may turn out to be the big pharmaceutical companies, whose commitment to generally available drugs capable of pushing the boundaries of the human condition are limited by their profit margins.

It is worth being clear about the exact problem with 'Big Pharma', or any privately owned firm that might be nominated to provide public goods. Taxation ensures a steady income stream that enables state to continue spending even when their projects fail to deliver on their promises. This is because even when the state is not trying to improve the human condition, it must still sustain a 'normal' human existence by maintaining the quality of health, education and utilities – and it is on this basis that elections are usually won or lost. From this perspective, Big Pharma and its kin are much more hand-to-mouth operations. Their income stream is determined by how many units they shift of whatever they currently have to offer. Of course, private firms have found ways of simulating the steady income streams that states get from taxation. Originally it was automatic subscriptions to products (which still operates in publishing) but nowadays 'brand loyalty' tends to function in that capacity. However, the lesson to learn from the most successful firm in recent times to exploit brand loyalty, Apple computers, is that it cannot stray too far from the expectations of their fans, or if they do, they need to invest a lot of effort to keep them along for the ride. Even a firm like Apple does not command the default legitimacy of the state or even organized religion – perhaps because it does not sufficiently stress the potential cost of defection? (An interesting book could be written about why Big Pharma failed to become a Brave New World-style complementary health provider in the 1960s, when the ideology of drugs as necessary for normal human existence was perhaps at its peak.)

Joseph Savirimuthu: *Humanity 2.0* brings to the fore the symbiotic relationship between biology and ideology. Interestingly, cyberlawyers are more concerned about regulating algorithms. In fact theology appears to have little or no discernible role in debates we are having on intellectual property, big data, smart cities, autonomous systems and MOOCs. What can Lawyers and Educators learn from reading *Humanity 2.0*?

Steve Fuller: Well, first, I would dispute the lack of theology in intellectual property. In fact, the history of intellectual property is largely about the formal recognition and encouragement of everyone's creative capacity in a way that doesn't make much sense unless it is supposed that we have been made in the image and likeness of the Divine Creator. (Reality check: Why does the US Bill of Rights begin with the right to free expression rather than the right to bodily dignity?) Whether you look at Milton's *Areopagitica* or Fichte's defence of author's (not simply publisher's) copyright or, for that matter, the justification for patents in the US Constitution, you do not have to dig deep to find a conceptual connection between human self-expression and divine entitlement. Moreover, no one seriously concerned with the promotion of human creativity has believed that the issue can be reduced to the removal of such obvious obstacles as state censorship. Creativity needs to be explicitly nurtured – which is to say, incentives are required for people to do more than simply conform to what others say and do – or, to update the problem for cyberspace, simply to allow oneself to be exploited as a consumer database. Thus, a battle against the passive animal side of humanity has had to be fought to enable people to make the most of their divine entitlement. Historically, this has meant mass literacy and technical education to enable people to write their own books and invent their own gadgets. And perhaps in the future, something akin to what Douglas Rushkoff advocates in *Program or Be Programmed* might be part of this general battery of skills that will allow people to properly 'own' their birthright as autonomous creators.

At the moment, the most misdirected, time-wasting controversies related to intellectual property are to do with 'natural vs. artificial', where 'natural' is supposed to signify something beyond the realm of property law and hence 'common' and 'free'. (Notice all of the unwarranted elisions here: natural = common = free.) This line has been doggedly pursued by the American Civil Liberties Union in an ongoing legal dispute in the US over the patenting of genes (generally known as the 'Myriad Genetics' case). Yet, as a matter of fact, property law has been one of the great civilising forces in making people take responsibility for their actions, which is the first step toward achieving a state of genuine autonomy. It is instructive to recall that the privatisation of the English commons was initially motivated by the need for herders to take responsibility for the sewage produced by their animals – 'negative externalities', as we would now say.

The question that is legitimately open to dispute – and my co-author Lipinska has been urging – is how to define the property owners. She was very much influenced by reading Michael Crichton's novel, *Next*, which calls on the state to own its population's genome in order to pre-empt the potentially adverse effects of corporate ownership (i.e. a reinvention of slavery). We can accept this as a starting point. But then the question becomes the sorts of social entities – individual or collective -- that are legitimately licensed to dispose of their genome, and under which terms. However one comes down on this matter, 'nature' has no normative role to play: Nature is simply raw material, capital – and it is only our ideas about the just means of its production and distribution that should matter in our legal deliberations. We continue to take seriously the idea – common to so-called utopian socialist like Saint-Simon and so-called scientific socialists like Marx & Engels – that socialism is meant to build upon, rather than reverse, capitalism's genuine achievements.

Joseph Savirimuthu: Finally, we are looking forward to seeing you in Liverpool for the BILETA Conference. Thank you for agreeing to give a Keynote Address and also in taking part in the Author meets Audience Event. We have two specialists streams - Big Data and Autonomous Systems (which raise some interesting questions about intelligent design). What do these innovations and technologies tell us? What conversations should we be having and what are we likely to have in 2020?

Steve Fuller: Let me answer this question briefly, and without pre-empting my keynote talk, which will be mainly about how technology has enabled *Homo sapiens* to both realize its divine potential and extend its control over nature.

One of the forgers of the 'modern evolutionary synthesis', Julian Huxley, saw human beings in a way that should be patently obvious but curiously does not carry much weight in today's Neo-Darwinian discussions. He said that we are the first species to comprehend the process by which life itself has come about and continues to be maintained on Earth. Evolution, according to Darwin, may have been happening for millions or billions of years, but humans are the first to know about it. For a true Darwinian this is extremely puzzling because our knowledge should be adaptive to our long-term survival as a species. However, it is by no means clear that the history of science and technology -- that along the way produced Darwin's genius -- is really oriented in that fashion. On the contrary, that history has been mainly about our understanding everything, everywhere, ultimately for reasons of control and in terms increasingly removed from everyday experience. Moreover, humanity's track record is not exactly comforting: world wars, nuclear threats, ecological crises, etc. must be weighed against science and technology's obvious benefits.

Nevertheless, I would argue that, for better or worse, this is exactly what humanity is – an inveterate risk-seeker who learns from both successes and failures sufficiently to be able to play another round at the cosmic casino. Given this definition of humanity, it should be obvious that any problem with new technology – be it 'big data' or 'autonomous systems' – is to do more with a lack of second-order awareness of how the technology works (i.e. can you turn it to your own advantage?) than the technology as such. Power is abhorrent for the many only if knowledge is concentrated in a few.

Joseph Savirimuthu: Thank you Steve - for your generosity and more specifically for your thought provoking answers to my questions.