

TRANSHUMANISM and THE POST OBJECT ECONOMY:

PART 2

PIGS MIGHT FLY ~ WHAT THEN IS TRANSHUMANISM?

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Transhumanism

INTRODUCTION

If you noticed Nokia, Google, Cisco and several other leading companies founding a University devoted to the augmentation of the human species, you might want to know more – certainly I do – welcome to the University of Transhumanist Singularity¹. We now have the same sort of institution in Australia². The Singularity describes a time when machines and humans become indistinguishable in their complexity, perhaps more than this, a time when the emergent cognitive inferiority of humans to machines matches the potential to augment humans by machines (Kurzweil 2005). This augmentation by the coalescing of human and technology into cyborgs, describes the Transhumanist agenda.

Generally the Transhumanist ‘marriage’ of us and machines, including biological materials implies the machines will be inside us or they and us will be mutually enveloped. In this article I want to explore this meaning and outline the problems.

Two types of change

Transhumanism wants hard objects to coalesce with us. By hard objects, I firstly mean material things like computers, but I also mean medical technologies. These are not the only things we could regard as ‘hard’. For the sake of opening up this field for discussion, I wish to go with these opposing descriptions despite their simplification. ‘Hard’ means here also; materially different, foreign, or boundary apparent as regards humans. ‘Soft’ means social systems, negotiated communication essential symbiotic connection, responsive physical communication and relationships.

The simplification is not intended to set up good and bad and part of my purpose is to show this is just that – a simplification. It appeals to the notorious ‘yuk’ factor as a baseline response of the uninitiated to Transhumanism. However it does go to the problem of the relationship of self, society, politics and culture to Transhumanism. Soft, I assume, is a situated human self, or subject, or in emotional and physical symbiosis and/or mutually dependently but separately co evolving. Hard is not readily digested by self/ body, self/mind or self/society without great alteration yet may prove beneficial.

Hard is adding enhancements like an additional artificial or human or animal heart, or an electronic third eye are what I am thinking of here or even flight say. Genetic manipulation surely is not ‘hard’

¹ <http://singularityu.org/community/partners/s>

² <http://www.facebook.com/SingularityUniversityAustralia>

but in the sense and breadth of major genetic intervention in our make-up, i.e. a significant reconstitution; I think we are best to retain that description. I add using objects we might intuitively see as hard, whose functions are only to return us to normalcy or as close as possible to that, I have not included in my hard items.

The point is that between self and the world are vital, complex relationships that constitute our deepest being and yet our separation from them. Some of these are ones within whose boundaries we regularly fall, not only as with relationships with other people but also responsive organisations. These relationships we regularly negotiate through language. Other more material entities we have a symbiotic relationship with, such as food. These I regard as soft also, even to society itself which is as I say a form of material entity.

Hard and Soft Boundary

Transhumanism seeks to dramatically alter some of these relationships and not others so as to 'augment' us. In general it represents hard interventions. Yet now I want now to qualify this and demonstrate that this hard/soft boundary is not just a way of associating Transhumanism with negative terminology. Nevertheless to the question of *what does Transhumanism mean? My answer is: it means radical alteration of self and self in relation to social and eco-social inc. other things and beings, while in the pursuit of a more 'technologically develop' being.*

Before we scare ourselves with the enormity of this challenge and this task and mistake Transhumanism as Frankenstein, let's agree: we already alter ourselves in numerous medical and surgical treatments. They remain attempts mostly to bring us back to health or give us health lacking from birth. We have already crossed over then through this division of hard and soft in practice and in our imaginations. Still, rightly or wrongly, we conceptualise them as therapeutic even though they offer, cosmetic/beauty, contraception or fertility, strength and much else. Transhumanism unashamedly dispenses with what we might call the hypocrisy of the therapeutic tag. While I think it's still a major concern we should recognise the slow accretion of scientific understanding is one path for Transhumanism and we have taken the first few steps already. Here's one answer to the question of what Transhumanism is: a journey that we have already embarked upon, in medicine and in literature, to change ourselves.

It helps, I think, to define Transhumanism imaginatively, historically, scientifically and technologically. The poetic or imaginative leap to Transhumanism has a long history. This Frankenstein-like dream is not new in conception but the speed of technological change, especially the genetic, digital and nano revolutions lend credence to it. The Frankenstein story of Mary Shelly's at the very beginning of the industrial revolution suggests an epochal status. Perhaps there is some significance in Frankenstein's re-emerging in popular film at its end - on the cusp of the new post object economy. The intention is to make the beast a post human in the Transhumanist idea. They don't hope for a Frankenstein, but quite what, I am not sure. ³

³ http://www.sentientdevelopments.com/2013/04/how-much-longer-before-our-first-ai_12.html

Let's look at the recent history of the emergence of Transhumanism and then travel closer to the science for those fed-up with the more speculative definitions, which I maintain are critical. Historically speaking, in 'Wrestling with Transhumanism, Katherine Hayles accepts the shift from evolution and natural selection driven by natural challenges has now become a co evolution of human and technology (Hansell and Grassie [ed]216). This co-evolution is accelerating in more recent times, launching Transhumanist potentials.

However some of this context is more than a technological one. Technology only takes the mantle of primary agent of change when it is both in a period of transformation and ideological vacuum or loss of hope about deeper justice related changes in society as a whole. Currently lending weight to Transhumanist directions is the declining character of the democratic process towards a soap opera, which also parallels declining hopes about averting evident environmental risks to us all, globally.

Aldous Huxley brother of the great supporter of Darwin's, Julian Huxley, first used the word Transhumanism in the 1957s in 'New Bottles for Old Wine'. Are we already close to this cyborg world? We look to Teilhard de Chardin, the Jesuit, as a modern pioneer of the idea of a spiritual union of technology and humans a decade earlier (Steinberg 2008). In fact, wartime and post war technological developments are crucial - World War 11. We have other threads demonstrating Transhumanism emerged historically and scientifically in circumstances we need to analyse, but mostly beginning with the rapid technological growth that we associate with that war and the Cold War when hope invested in socialism was dashed by the horror of its application in Eastern Europe.

Let's remember this context of the renewed dreams about redesigning humans because we need to understand Transhumanism at the level of society. In the 1950s, scientists especially some left leaning progressives, envisaged a perfect world of perfect 'persons'. As the Cold War dragged on blocking political solutions and the general left buried in the quagmires of Stalinism, "HG Wells imagined *a small group of benevolent scientist technicians using science and technology to manufacture a perfect future*". The early socialist Utopian, Fourier had such a plan⁴. The influence of socialist ideas seceded into a technological utopia. The Cold War crisis ramped up the need to find a way out of dire threats of conflict and domestic political stalemate (Tirosh-Samuelson in Hansell and Grassie [ed.] 2011 p21-22). In the 'fifties, technology took the mantle of progress and utopian dreaming - both. Plain old socialism no longer seemed utopian especially after the Stalin Trials of 1956. The Western Cold Warriors forbade mention of it.

With the Cold War, the focus of utopia shifted to technology and another 'apolitical' realm of individual growth. This was so especially, given the dystopia of communism. Hava Tirosh – Samuelson sees a number of noticeably individual oriented projects for social change fertilising the Transhumanist ideas. Maslow's and the Human Potential Movement's belief draw on older themes and memes where man becomes godlike (in Hansell and Grassie [ed.] 2011 p21-22).The individual and technology foci escapes political scrutiny.

⁴ http://en.wikipedia.org/wiki/Charles_Fourier and <http://www.facebook.com/SingularityUniversityAustralia>

Miniaturisation/Nanoinisation appears as another common thread in the scientific and technological dimension, in the sense that minute detail became further observable and potentially manipulated in ways never imagined. There is also the recognition that even minute particles self organise. Cybernetics like the digital revolution recognises the capacities of systems to self-govern. Just as an example, we might harness with astute molecular manipulation, the human or other biological cells' capability for formation and repair of damaged structure. This harnessed capacity might repair other matter exported to other cells and into further biochemical technologies.

Further **digitization** is crucial to robotics, if transistors were an early step of speeded up and miniaturised information processing reaching to the mass market. Isaac Asimov and Arthur Clarke's science fiction were the midwives of this type of imagination and design- a reminder that science and invention do not plod along in science laboratories but need imagination. That's something to remember as we think about technology as the answer because the answer is also in the imagination and the society that surrounds this technology of self organisation, self management and even self reproduction i.e. cybernetics or artificial intelligence.

Miniaturisation and microscopy take us to a discrete level of object production. Such an object can be inside us. It is this that escalates the imaginations drawn from technology. However transforming us by deliberate redesign is indeed new territory, more amazing and concerning. It is more evocative of questions that previous technological marvels. Critically, the project of remaking ourselves or producing ourselves cannot escape, as technology usually does, the silence which hides the question of the social impact. Its sense of upheaval seems prodigious.

So what do Transhumanists plan to redesign?

First and foremost transhumanists imagine brain function exponentially speeded up. However the cognitive enhancement deemed to provide better decision making is just the beginning of pathways of deep change. Post humans the proposed product of Transhumanists, may have a reconfigured set of organs, skeletal frame, biochemistry, physiology and more to the point genetic modification. Some Transhumanists rest their optimism about transforming or augmenting us by imagining us as digital beings. This much different from the digital of an opposable thumb! Significantly living without bodies in a digital medium is their ideal, and to so realise longevity.

Transhumanism may include **genetic hybridisation** of humans and animals, implanting one species in another. Post humans may have extra cognitive functions with computer technologies, or spliced-in longevity genes, or different lung capacities to breathe a more carbon rich atmosphere. The mind boggles at the array of persons with variable powers. We, if we become Transhumanists, in practice may be the last mortal generation (Broderick 1999). Living perhaps to 200 years, and /or devolving or evolving to digital or new biological or cyborg form (half machine, half human), we might look quite different or, dispense with our bodies and even faces .

The three pillars that support Transhumanism are the emerging sciences and practices of **nanotechnology, genetic engineering** and **digitisation**. Applying these technologies in an amalgam of human and machine assumes their congenial connection, ready points of embrace or connectivity a readability of the outcome, and that outcome as the best of both worlds. If there is another outcome surely it is the point of deep interrogation while we are still as we are - human subjects.

The points and processes of manipulation of the biological, molecular and silicon substrate may proceed unabated but their mutual connectivity with a sense of effects on the whole person is far more problematic. However cybernetics is common foundation to all.⁵

From Wikipedia

*"The term 'cybernetics' was coined in [Norbert Wiener's](#) book *Cybernetics or Control and Communication in the Animal and the Machine* (MIT Press, 1948). Wiener used the term in reference to the control of complex systems in the animal world and in mechanical networks, in particular self-regulating control systems. By 1960, doctors were performing research into surgically or mechanically augmenting humans or animals to operate machinery in space, leading to the coining of the term "cyborg," for "cybernetic organism."*

Intelligence is in the world around us -everywhere.

A nano meter is a billionth of a meter. Few of us think of nanotechnology as beginning in the nineteen-fifties, since it seems more recent. Transistors –the transistor radio was a watershed in the popularisation of nanotechnology .War itself, a font of destruction and invention creating technological fantasies and new inventions, so that nanotechnology predictably began in the WW11 with optical coatings.⁶

From Wikipedia: Nanotechnology (sometimes shortened to "nanotech") is the manipulation of matter on an atomic and molecular scale. Generally, nanotechnology works with materials, devices, and other structures with at least one dimension sized from 1 to 100 nanometres. Quantum mechanical effects are important at this quantum-realm scale. With a variety of potential applications, nanotechnology is a key technology for the future and governments have invested billions of dollars in its research. Through its National Nanotechnology Initiative, the USA has invested 3.7 billion dollars. The European Union has invested 1.2 billion and Japan 750 million dollars. To learn about research developments in Australia this website will be useful⁷ . With the miniaturisation reconstruction of the fundamental particles of objects, the point is the intervention is at the microscopic level the potential however is direct opposite in terms of effect.

The genetic revolution heralds the seemingly endless redesign of biological matter. It too, in reference to its work with the minute is very much a parallel to nanotechnology. So much points to DNA being the key of reconstruction of matter via the understanding of and manipulation of its molecular structures. This energises biology to perform human imposed tasks. There is a parallel to the way electricity energises matter and transforms it. Genetic engineering uses a small element of nature to make biological processes bend to our intentions. With genetic engineering vast changes will eventually appear possible in species reproduction and minute biological activities including

⁵ Possible Forms Of Life emergent from this 'technobrew' are explored in the article on 'Life Futures' by Paul Wildman in this Issue of CRAFT

⁶ <http://secondbang.blogspot.com.au/2008/10/nanotechnology-from-nano-dream-to-nano.html>

⁷ <http://www.ausnano.net/files/NanoQ4.pdf>

creating new means of biological or nature transformation. These outcomes are almost unrelated to attending to the ill. Rather this is an emerging production process not a therapy in essence, much as they are connected. Both technologies appear to overcome 'foreignness' of matter added to the body.

And if DNA is one code then silicon is the other: one which allows us to compute once impossible problems at the speed of light. Moore's law⁸ tells us major information revolutions are occurring every 2 years. Twist these semiconductors, biological and miniaturisation elements together and one can understand, and to a point share, Transhumanist optimism, even if we may well fear the bizarre - Frankenstein.

Perhaps nevertheless we could use these potentials in other ways so that these humans, we are redesigning better serve goals other than selfish and short term human empowerment. Crises will test our resolve and ability to survive. Transhumanism might offer one last chance.

STRONG AND WEAK TRANSHUMANISM

There are different Transhumanisms.

I have used a standard logical division between firstly, strong Transhumanism, where the Singularity agenda of marrying human and machine ramps up to its maximum potential or its horizon of possibility: a perfect matching. Secondly, because of its limited goals, weak Transhumanism, which least disrupts our bodies and minds and likewise our values, behaviours and characteristics or so it would seem.

Weak Transhumanism is here, if in minimalist shapes, which barely making political ripples, even if our lives have all been changed as a consequence. Circulatory implants, nerve bundle firing, augmentation, hormonal alteration let alone pigs valves. Already, medicine has become part of a hope of transformation. Pigs already fly or parts of them do – on passenger planes.

Weak Transhumanism indulges a well know conservative dislike with tinkering with 'creation' and a healthy, if at times Luddite, scepticism founded in risk assessment about new technologies. Weak Transhumanists might advocate remedies that are genetically derived, computer connected or molecularly manipulated via nano-robots for well-known afflictions beyond diseases - "normal" joint wear and tear giving a preventative protection. Perhaps standard treatment for athletes, with this seemingly modest intent of prevention, more generally, doctors allows might augment humans, help with birth abnormalities, while the factors of risk assessment and tradition are held paramount .

Here, if we augment, these have already run a traditional gauntlet of official Therapeutic Goods approval, parliamentary committee and public acceptance. In other words, first and foremost the precautionary principle applies. That is 'augmentation' only when it is required for compensation aimed at healthy, not wealthy, normality. Therefore the weak case is benign seemingly.

⁸ http://en.wikipedia.org/wiki/Moore's_law

However the weak case like the strong is predicated upon a world view of design and construction. The secrets of humans we can learn to quantify and copy. Even if such interest groups espouse the need for rigorous testing of augmentation on a case by case basis, their adherence to this constructivist viewpoint is a strong endorsement of Transhumanism. Opponents - Creationist or evolutionary purists might object as might cultural theorists. Since repair of specific types of malfunction is the aim, such concerns seem pedantic and miserable. Which side of this demarcation the majority of the population are it is not hard to guess. Yet when we look at modern medical technology it has already changed biology –The Pill. We have already moved along this path in some views so the continuum between weak and strong is a concern and discussed in a section on risk.

Then why bother with the strong case? Well it could sneak under the radar in another guise of which the essay seeks to warn. Its practice in some respects might be quite mundane. By mundane I mean that of normal commercial practice, advertising and trading stripped of qualified individual medical endorsement operating in a free and open market in various locations in the world. Yet Transhumanism has strong Utopian currents too, and rather than slipping under the radar we can imagine it pushed there by powerful interests with strong agendas as the Singularity idea already implies.

The strong case has a far more serious set of implications for society. I believe there should be, a new mechanism of accountability, to meet the challenges of the strong case. As I will show, without this, Transhumanism is a recipe for chaos or worse. However I am fully aware our own society stands on a precipice – in chaos. Transhumanism might fall under the radar as the desperate solution. If we prepare our democracy, it could at least occur within the radar.

We can adopt a concrete approach to our world and ourselves too. Under this view the point of least resistance allows the most tinkering – the medical not the social or political full as they are of ideologies, values and other abstractions. That choice of the path of least resistance needs our full attention for it is an enormous assumption, despite our growing pessimism about politics. We equally we must define the democracy we talk about. For social or political tinkering has its own drawbacks especially where it purports to be utopian.

Imaginative Transhumanism

We should pay homage to the fact that Transhumanism is broadly discussed and embraces a great variety of views of sharing the constructionist outlook, where self, identity and mind mean little if anything. Where these differences show more clearly is when we imagine the compatibilities between weak and strong Transhumanism and democracy, its heritage, and challenges.

Transhumanism has had an imaginative history relit by industrialism and its threats or negative consequences as well as its promise. It emerges as a solution, sometimes a utopian one, in which technology is critical. It builds through rapid technological change, especially in the growing ability to miniaturise and micro manipulate molecular processes, and by the ability of humans to gather and speed up the processing of information through digitisation.

Yet at the heart of the project of Transhumanism remains a contradiction because it assumes we can be like objects or objects like us. That must mean that we can stand back from life experience

personal and cultural history and yet ingest a product that is cognisant of all. So we have a perfect partner, who knows more about us than we do ourselves, and knows about itself, made by us and it.

The electronic circuitry is stymied by the logical circularity: the blind inventing the blind.

However I think we need to retain the sense that this is not about circuits alone. We need to see that our society produces technological possibilities, raises and dashes hopes and leaves open a yearning for change or improvement. Transhumanism grows where there is risk and demise of legitimacy. Transhumanism is an amalgam of elements of hope, imagination, ideological vacuums and ideological surrogates. It is equally the product of technological possibility, and scientific insight remarkable parts of recent history.

As a surrogate for social change or hope, Transhumanism shares with positivism a dislike of abstractions of a non-scientifically validated type. The dimension of subject and object therefore again appears in this tension between technological and cultural factors. Transhumanism is a product of hope, sourced in subjects for which it offers not the social, the imaginative and human as carriers of optimism but the technological, the scientific and the post-human. Strong Transhumanism exemplifies this challenge more than weak, however it is present in both. We need Socially Imaginative Transhumanism.

CONCLUSION

Our purpose perhaps is to explore these dimensions of mismatching for we have managed to live with technology and scientific change operating synergistically with social change. The Enlightenment enforced democracy and vice versa. My study pursues that rift, but my own practice has always gravitated to activist social change as the primary force for broad hope – and this continues with Transhumanism now embedded in my activist brew so to speak. I admit Transhumanism challenges my activist and socially engaged orientation and dare I mention it a mild aversion to science.

Readers Note: References for all of Dr Jim Prentice's articles are included in one document under the tile 'references'.