THE TRIUMPH OF VIRTUAL REALITY
AND ITS IMPLICATIONS FOR PHILOSOPHY AND CIVILIZATION

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ABSTRACT: Where will the philosophers of the future come from and can we have civilization without them? In this paper I argue that there is a co-dependent relationship between philosophy and civilization, one that has emerged and developed in relation to the emergence of information technologies, particularly writing and print and conditions for deep and prolonged concentration. The internet, however, today's powerful information technology which is increasingly mediating humanities relationships, is proving to be a technology which threatens this relationship. The internet is a technology which draws us in, obliterating the distance required for critical thought. Unless we can find ways to distance ourselves from this technology, this creator of high fidelity virtual realities, we will become trapped in our hi-tech representations. This will be the triumph of virtual reality and perhaps the end of civilization and philosophy.

KEYWORDS: Virtual reality, philosophy, civilization, internet, information, technology.

Nicholas Carr in his book, *The Shallows: What the Internet is Doing to Our Brains*, argues, that as a consequence of our increasing engagement with the internet:

> What we're experiencing is, in a metaphorical sense, a reversal of the early trajectory of civilization: we are evolving from being cultivators of personal knowledge to being hunters and gatherers in the electronic data forest.[1]

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[1] Carr N., *The Shallows: What the Internet is Doing to Our Brains*, (W.W. Norton and Company, New York, 2010), p. 138

This is Carr's generous way of saying that the internet is destroying the conditions for civilization and replacing it with conditions for barbarity and that the instrumental view of technology is dangerously naive.[2] In this paper I will examine Carr's and other's as well as some of my own concerns about internet use as well as speculate about why he may be right and why changing this trajectory will be difficult. I will also suggest that a world of data hunter-gatherers will not be one conducive to the practice of philosophy. Firstly, what are the concerns?

CONCERNS WITH THE INTERNET

Carr brings together an extensive and impressive body of research in psychology, neuro-science and philosophy to reveal the internet to be detrimental to our development of abilities for deep understanding and concept formation. His main arguments draw on relatively recent research which reveals our brains to be highly plastic. He suggests that Marshall McLuhan was right and those arguing that technology is neutral, wrong in that the medium of the internet and not just its content is changing its user's brains in ways which may undermine the conditions for civilization. These are. he argues, the conditions for deep self-reflection in which humans can engage in what was for early humans an unnatural activity of deep reading and comprehension; unnatural, because it requires the relatively secure and quiet conditions provided by a civilized society to enable deep concentration without distraction, a condition associated mainly with print technology and only available to humans for a relatively short period of our history. Alternatively, the internet is a technology designed to continually distract us; 'an ecosystem of interruption', as Cory Doctorow terms it.[3] The ability of the digital screen to be sectioned into multiple presentations of information makes it a medium in which the deep participation of continual decision-making is required. It makes it, as McLuhan famously argued, an extremely 'cold' medium.[4]

Engagement with the internet, according to Carr, changes our brains in such a way that we become less able to focus on deep concept formation which requires exercising our long term memory. Instead, through over-stimulation, we only engage our short-term memory limiting us to little more than hunter-gatherers, or data

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[2] This view that technologies are mere tools has been largely discredited, most famously by Martin Heidegger in his essay, 'The Question Concerning Technology', *The Question Concerning Technology and Other Essays*, (Harper Torchbooks, New York, 1977).

[3] Carr N., op. cit., p. 91.

[4] McLuhan's distinction between 'hot' and 'cold' media is in McLuhan M., *Understanding Media: The Extensions of Man*, (MIT Press, Massachusetts, 1994).

processors, expertly alert to continual fragments of information but unable to make sense of them or contextualize them. Carr cites many studies revealing retarded development amongst young internet users, but he also sees signs of retardation in the emergence of the integrated and perhaps, oxymoronic, post-literate intellectual who proudly argues that reading Proust, Shakespeare or Dostoyevsky is overrated. Carr warns us that these post-literates are more than the latest manifestation of the anti-intellectual wing of academia; they are products of digital computer technologies. He states that:

Although it may be tempting to ignore those who suggest the value of the literary mind has always been exaggerated, that would be a mistake. Their arguments are another important sign of the fundamental shift taking place in society's attitude toward intellectual achievement. Their words also make it a lot easier for people to justify that shift – to convince themselves that surfing the Web is a suitable, even superior, substitute for deep reading and other forms of calm and attentive thought. [Post-literates]…provide the intellectual cover that allows thoughtful people to slip comfortably into the permanent state of distractedness that defines the online life.[5]

Carr's perspective is powerful because he admits to being an excessive internet user. In order to develop his critique and write his book he had to distance himself from the internet and engage in deep reading and contemplation in order to realize that his addiction was destroying the conditions which allowed him to become an intellectual at all. Neuroscientist, Susan Greenfield, also sees emerging problems with intellectual development due to internet use. She identifies brain transformations in internet users which are affecting their ability to be able to develop a coherent sense of self due to the fragmenting effects of internet use. This is contributing to increases in internet addiction because at the same time as constraints are being removed from information flows, more and more users are finding their fragmented selves less capable of self-restraint. Self-restraint requires developing a coherent sense of self and this requires an ability to construct narratives in which there is continuity between the past and future. According to Greenfield, the process of being led by an author along a linear narrative provides the conditions, particularly for the young, for being able to compare narratives, which then provides the conditions for being able to build up conceptual frameworks, including continuous concepts of self.[6] Screen-based activities, however, are shortening the attention spans of users which are required to attentively follow such narratives. But there is perhaps an even bigger problem in her argument that:

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[5] Carr N., op. cit., p. 112.
[6] Greenfield S., *ID: The Quest for Identity in the 21st Century*, (Sceptre, London, 2008), p. 165.

The capacity to sustain only shorter attention spans might itself drive the need for more stimulation within short periods of time. And, along with shorter attention spans, the ability to 'lose' yourself in a good book might also be in jeopardy. Just as reasoning and thinking skills may be stymied by a fast, screen-based and therefore visual experience, so also might that mysterious and very special cognitive achievement be threatened that, until now, has always made the book so much better than the film; imagination.[7]

Virtual reality technology pioneer, Jaron Lanier, sees similar threats to imagination.[8] Lanier's main argument against the internet is that it is not living up to its promise of generating creativity and is actually stifling creativity through becoming over-constrained by unimaginative and seemingly immutable, mechanical formats. This is because we are allowing our gadgets to create us in their image. For example, when we engage in social networks and refer to sometimes thousands of Facebook nodes as friends, Lanier claims that we are devaluing the meaning of the term, friend, reducing it to the machine level.[9] Lanier also believes that we are devaluing individuals in favour of a hive mentality through an obsession with anonymity. The anonymity, emerging and desired by those creating the internet 'Cloud' or noosphere, such as in Wikipedia, produces billions of bits of data abstracted from the authors. This lack of presence, however, the separation of the word from the referent, leads to the same problem of nihilism which deconstructive postmodernists faced. With no one representing a view, no one to argue against, we are left with a virtual world of free-floating signifiers. This anonymity also abstracts internet content from experience making internet information appear as ahistorical. This has the potential to further destroy creativity and eventually transform the internet into a world of static Platonic Forms.

James Harkin argues similarly that the cybernetic theories underpinning the technologies of social networks are nowhere near adequate to define human nature and are in fact transforming human nature into machine nature. The deepest flaw in the basis of modern computing, cybernetics, he argues, '…lies in its rarefied understanding of what it is to be human.'[10] In line with cybernetic theories, the internet is locking humans into a mechanical series of feedback loops. He argues, however, that:

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[7] Ibid., p. 174.

[8] Lanier J., *You Are Not a Gadget: A Manifesto*, (Alfred and Knopf, New York, 2010).

[9] Ibid., p. 53.

[10] Harkin J., Cyburbia:, The Dangerous Idea that's Changing How We Live and Who We Are, (Little, Brown, London, 2009), p. 253.

> What distinguishes us as humans is not that we are capable of cycling through an endless feedback loop but that we can progress with some kind of purpose. Pay too much attention to that information loop and the danger is that we lose sight of the reason why we are there in the first place.'[11]

Stuck in our information loops, digital information technologies actually act to limit our potential, over-constrain it, rather than expand it as their promoters claim. Becoming uncritically integrated into a particular constructed system of networks, for example, limits our ability to think creatively outside of them, as Harkin points out in regard to failed military applications of cybernetics in the Gulf Wars.[12]

Viktor Mayer-Schönberger also argues that the internet is adversely affecting the relationship between long term memory, intelligence and a coherent sense of self. He argues that the efficient digital outsourcing of memory in internet use is altering the natural balance which has always elevated forgetting over remembering.[13] The ability for our computers to cheaply and accurately store information is privileging the relatively unchanging computer memory over the plastic, interpretative nature of human remembering that sees us creatively constructing the past in the present.[14] As Hobart and Schiffman argue, human memory is not a mechanical system for storing information but one that provides us with existential stability. According to them, 'Our memory of ourselves comprises not so much the collected facts of our personal history as the act of retelling, and thereby reorienting, ourselves in an ever-changing present.'[15] Efforts to store all memory reveals a complete lack of understanding of the conditions for existential stability and as Mayer-Schönberger suggests, leads to the development of pathologies such as inability for forgiveness. Mayer-Schönberger also highlights a danger for critical thought in the ability for third parties to store masses of decontextualized information about us. This, he argues, is having the effect of making us more cautious, less willing to challenge the status quo.[16]

There is another relevant concern for existential stability coming from Neuroscience and psychiatry. This is the argument of Iain McGilchrist that there is a dialectical relationship between the two hemispheres of the brain and that this relationship is becoming profoundly unbalanced due partly to the privileging of

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[11] Ibid., p. 254.

[12] Ibid., Ch. 9.

[13] Mayer-Schönberger V., *Delete: The Virtue of Forgetting in the Digital Age*, (Princeton University Press, Princeton, 2009)

[14] Ibid, Ch. 3.

[15] Hobart M. E. and Schiffman Z. S., *Information Ages: Literacy, Numeracy and the Computer Revolution*, (The Johns Hopkins University Press, Baltimore, 2000), op. cit., pp. 26-27.

[16] Mayer-Schönberger V., op. cit., Ch. 4.

abstract, disembodied experience such as internet use. The history of the development of scientific materialism has seen the tightly focused, analytic capacities of the left hemisphere being developed at the expense of the less focused. contextual, holistic capacities of the right. This is creating a world both of schizophrenics and those who mimic schizophrenia. As McGilchrist suggests:

> ...it is as if the left hemisphere, which creates a sort of self-reflexive virtual world, has blocked off the available exits, the ways out of the hall of mirrors, into a reality which the right hemisphere could enable us to understand. In the past, this tendency was counterbalanced by forces from outside the enclosed system of the self-conscious mind; apart from the history incarnated in our culture, and the natural world itself, from both of which we are increasingly alienated, these were principally the embodied nature of our existence, the arts and religion. In our time each of these has been subverted and the routes of escape from the virtual world have been closed off. An increasingly mechanistic, fragmented, decontextualized world, marked by unwarranted optimism mixed with paranoia and a feeling of emptiness, has come about, reflecting, I believe, the unopposed action of a dysfunctional left hemisphere.[17]

There is more evidence and more critiques emerging to support the previous views which cannot be included here. It is from the view of McGilchist, however, where we can develop an understanding of why civilization is under threat from the internet and why it will be difficult to avert it. Extending McGilchrist's metaphor of the brain hemisphere dialectic, as he does, and taking an embodied view that we humans cannot be reduced to our central nervous systems but that we are our central nervous systems among other systems, as Mc Gilchrist also does, and in light of the problems associated with internet use identified by those just discussed, I suggest that it is the entrapment in dysfunctional virtual realities which is subverting the capacities for individuals and societies to create the conditions for civilization, as well as philosophy. Understanding what dysfunctional virtual reality is will require some investigation into its nature, or perhaps, lack of it.

VIRTUAL REALITY

Virtual reality is a relational and dialectical concept and only exists in relation to reality. Or at least it should. The problem identified by McGilchrist, however, suggests that virtual reality, for some, can exist independently. Being disembodied and trapped in a virtual world is to be separated from all others and to have your view

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[17] McGilchrist I., *The Master and his Emissary: The Divided Brain and the Making of the Western World*, (Yale University Press, New Haven, 2009), Kindle Edition, Introduction.

of other possibilities obscured. The view that objects can exist independently, is a materialist and analytic one in which already emergent structure is seen as primary, the view associated with the left hemisphere. My understanding of reality is within the tradition of process philosophy which argues that reality is primarily unfathomably complex relational processes from which structure emerges and distinguishes itself. It is a holistic view more associated with the right hemisphere which acknowledges its interrelatedness with and is inclusive of, other views. An understanding of the primary reality of process reveals that abstract virtual realities can only give us limited levels of control against a backdrop of indeterminate processes. In the following I hope to reveal that the problems identified with internet use are associated with the medium's ability to create virtual worlds which, like materialist and analytic views, obscure the real complexity from which they emerge, trapping us in simplistic representations.

To better understand virtual reality, it is not enough to simply associate it with the definition emerging around 1960 when the potential to create graphic simulations of reality using computers emerged.[18] The history of art reveals examples going back thousands of years, of verisimilitude, deception and illusion. Histories of virtual reality often make mention of Roman historian, Pliny the Elder. In the 1st century CE, Pliny, tells the story of a competition between Zeuxis, a Greek painter born around 464 BC, and Parrhasius, his contemporary. The pair held a contest to decide which of them, was the better painter. Apparently, Zeuxis' painting of grapes was so life-like that birds flew in to nibble on them. 'When Zeuxis asked Parrhasius to pull back his curtain and reveal his work of art, Parrhasius was able to inform his friend that there was no curtain; *the painting was of a curtain*. Zeuxis is quoted as saying: "I have deceived the birds, but Parrhasius has deceived Zeuxis."'[19]

The Ancient Greeks, therefore, were active in creating virtual realities meant to deceive, as I am sure many humans did before them, but for Aristotle this did not represent ethical practice. For him, the creation of virtual realities could be understood through his concept of *mimesis* whereby imitations serve to educate by revealing the relationship between the ideal and the real, being and becoming. Aristotle argued that we are mimetic beings, '…the most imitative of living creatures' and through this imitation we learn our earliest lessons and derive pleasure.[20] But

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[18] These developments are documented by Michael Heim in Heim M., *The Metaphysics of Virtual Reality*, (Oxford University Press, Oxford, 1993), Ch.8.

[19] This is in Eyb L., 'Optical Illusions: Is That an Exhibition of Trompe l'œil Coming to Florence and Paris?' (12/12/2009) at http://heritage-key.com/blogs/lyn/optical-illusions-exhibition-trompe-l%E2%80%99%C5%93il-coming-florence-and-paris, (accessed 20/7/11).

[20] Aristotle, *The Poetics of Aristotle*, trans. S. H. Butcher,(the Pennsylvania State University, *Electronic*

Aristotle's view on this is a product of literacy, of what Walter Ong described as, the movement from *mimesis* to irony which was the movement from oral to literate culture enabled through the use of highly abstract information technologies such as writing and the phonetic alphabet.[21] Aristotle's notion of *mimesis*, however, is more than this. It is like Kierkegaard's mimetic ideal of progress from *mimesis* through irony to imitation. As Rasmussen suggests:

> When imaginatively employed as a "controlled element," Kierkegaard allows, "irony as the negative is the way; it is not the truth but the way." Through controlled irony, one imaginatively abstracts from his or her concrete actuality and envisions possibility, infinitude, and God. This "negative" moment helps to save an individual from what Anti-Climacus calls the despairing and sinful "secular mentality" of the merely imitative man who finds it "easier and safer to be like the others, to become a copy."[22]

According to Puetz, for Aristotle:

> Works of art are encoded in such a way that humans are not duped into believing that they are "reality", but rather recognize features from their own experience of the world within the work of art that cause the representation to seem valid and acceptable. Mimesis not only functions to re-create existing objects or elements of nature, but also beautifies, improves upon, and universalizes them. Mimesis creates a fictional world of representation in which there is no capacity for a non-mediated relationship to reality.[23]

Similar to Kierkegaard, therefore, imitation becomes more valuable if it can be recognized as not being real and not in using it as Parrhasius did, to deceive. As Davis argues:

> At first glance, mimesis seems to be a stylizing of reality in which the ordinary features of our world are brought into focus by a certain exaggeration, the relationship of the imitation to the object it imitates being something like the relationship of dancing to walking. Imitation always involves selecting something from the continuum of experience, thus giving boundaries to what really has no beginning or end. *Mimêsis* involves a framing of reality that

Classics Series, Pennsylvania, 2000), Book IV, p. 7, at http://www2.hn.psu.edu/faculty/jmanis/aristotl/poetics.pdf, (accessed 2/8/11).

[21] This is in Ong W. J., 'From Mimesis to Irony: The Distancing of Voice,' *The Bulletin of the Midwest Language Association*, Vol. 9, 1976, pp. 1-24.

[22] This is in Rasmussen J.D.S., *Between Irony and Witness: Kierkegaard's Poetics of Faith, Hope and Love*, (T & T Clark International, New York, 2005), p. 129.

[23] Puetz M., *Mimesis*, The University of Chicago, Theories of Media, Keywords Glossary, (Winter, 2002) at http://csmt.uchicago.edu/glossary2004/mimesis.htm, (Accessed 22/10/11).

announces that what is contained within the frame is not simply real. Thus the
more "real" the imitation the more fraudulent it becomes.[24]

As I suggested, for Aristotle, *mimesis* was as much about ethics as poetics. It was a
medium for exploring the nature of *Arete*, or virtue. The etymology of the word
virtual reveals that the adjective, virtual, comes from the noun, virtue and that this
has some significance. Virtue comes from *virtus*, the name of the Roman God of
masculine strengths such as valor, excellence, courage and character.[25] *Virtus*, was
itself derived from the Ancient Greek deity, *Arete*, which is generally associated with
Aristotle's concepts of virtue achieved through *Paideia*, education in the virtues. The
word virtual appears in the 14th Century relating to the capability, or power, to
influence by virtues but it is not until the 17th Century that the word comes to mean
something in essence but not in name; something seeming to have the qualities of
something but is not that something.[26] This sense was then appropriated by the
emerging science of optics within which the image in a mirror came to be called a
virtual image as distinct from that which casts the reflection.[27]

This scientific definition of virtual image, however, gives no place to active,
intentional consciousness and the role of what existentialists such as Sartre argued was
the condition for knowing reality from illusion at all, imagination.[28] *Mimesis*, on the
other hand suggests that reflections and simulations of reality are idealized and that
they should be recognizable as such. For example, while the Ancient Greeks based
their concepts of virtue on the observed behaviour of some actual members of the
Polis, (practice precedes theory), these practices were then conceived by philosophers
as ideals to which all should aspire so that theory then comes to precede practice.
This means, I argue, that those philosophers engaged in conceiving of worlds in which
all, or at least most, behave virtuously, are creating virtual realities which are
idealizations of reality and not just simple copies. Virtual realities are therefore
products of human imagination; idealizations of worlds that are virtual utopias.
Virtual realities are not just utopian, however. They can also be idealizations of
dystopias in which virtue fails to flourish. From my perspective, virtual realities can

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[24] Davis M., *The Poetry of Philosophy: On Aristotle's Poetics*, (St. Augustine's Press, South Bend, 1992).

[25] virtue. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc.
http://dictionary.reference.com/browse/virtue (accessed: August 03, 2011).

[26] virtual. Dictionary.com. *Online Etymology Dictionary*. Douglas Harper, Historian.
http://dictionary.reference.com/browse/virtual (accessed: August 03, 2011).

[27] virtual. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc.
http://dictionary.reference.com/browse/virtual (accessed: August 03, 2011).

[28] For Sartre, imagination is a distinct form of consciousness and our ability to imagine things as they are
not, the condition for freedom. Sartre J. P., *The Imaginary: A Phenomenological Psychology of the Imagination*,
trans. J. Webber, (Routledge, London, 2004).

be thought of as the imaginative, self-conscious playing out of possible scenarios of possible worlds.

From this perspective, the creation of virtual realities can be understood broadly as mimetic processes of ordering through which humans are able to anticipate uncertainty; continually create and maintain integrity amidst constant change. They are processes involving analogical thought which enable us to distinguish and evaluate relationships as particular trajectories in our worlds. I understand living organisms to be autopoietic organizations.[29] Humans are semi-autonomous organizations which act to self-create their organization maintaining themselves as distinct trajectories. We do this by drawing on past experience to create multiple possible anticipations of the future in each moment of the present. This allows us to be goal oriented but not locked in to one, particular, anticipation. In other words, we are capable of change while maintaining order. This condition for life is what complexity theorists have called, 'the edge of chaos.'[30] It is at the edge of chaos, I argue, where the fine balance exists, which, is the condition for the flourishing of life. But this balance should now be understood as an ideal, as a virtual product of my human imagination that like all other concepts should be understood as potential and not be reified. Any attempt by me to present this concept as other than potential, as actual reality, would be a deliberate act of deception. Of course, such an act could only succeed if those I was trying to deceive were ignorant of this reality and here is where potential problems emerge in relation to current approaches to virtual reality.

VITUAL REALITY: THE PROBLEM

Problems associated with current understandings of virtual reality are revealed through a more specific definition of virtual reality related to today's digital information technology, what Hayles calls, 'virtuality'. Hayles defines virtuality in the following: 'Virtuality is the cultural perception that material objects are interpenetrated by information patterns.'[31] In this definition, materiality and information are conceptually distinct and information regarded as '…more essential,

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[29] This conception of self-organization of life is in Maturana H. R. and Varela F. J., *Autopoeisis and Cognition: The Realization of the Living*, (D. Reidel Publishing Co., Dordrecht, 1980).

[30] A discussion of the phenomenon of edge of chaos conditions and its ubiquity in living systems is in Ward M., *Universality: The Underlying Theory Behind Life, the Universe and Everything*, (Pan Books, London, 2002), Ch. 4.

[31] Hayles N. K., How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics, (The University of Chicago Press, Chicago, 1999), pp. 13-14

more important and more fundamental than materiality.'[32]   These information patterns are sometimes likened to computer bits. As Gleick describes it:

> The bit is a fundamental particle of a different sort: not just tiny but abstract - a binary digit, a flip-flop, a yes-or-no. It is insubstantial, yet as scientists finally come to understand information, they wonder whether it may be primary: more fundamental than matter itself. They suggest that the bit is the irreducible kernel and that information forms the very core of existence…The whole universe is thus seen as a computer – a cosmic information-processing machine.[33]

It is this belief that information is primary, according to Hayles, which underpins the posthuman position that fundamentally machines and humans are analogous, legitimizing efforts to construct humans in terms of the machine.[34]   This belief is challenged, however, by the view that information is not primary but has its own history, one that is deeply interrelated with the history of *mimesis*. This is the view that information is emergent.[35] As an emergent, information cannot be an element, a pure substance which cannot be composed of anything else. Information has form and is thus a composite entity.   Information emerged as the informing of thought, the extension of abstract thought into more enduring forms through which thought could be externally stored.   Information emerged and developed with its associated technologies of writing, printing and electronic data storage.   As Hayles argues, information is embodied. It requires pens, paper, silicon chips, and LCD screens to exist at all. Information is therefore relational rather than primary and abstracted from these technologies the concept of information becomes meaningless. Hayles' definition of virtuality suggests, however, that abstract, disembodied information exists and is primary and defines today's cultural perception.

Ironically, this belief that what is primary in our universe is information, has been developed from many of the theories which have underpinned the development of my own views within the tradition of process philosophy which understands reality to be primarily active; views such as, cybernetics, autopoeisis and emergence.[36]   However,

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[32] Ibid, p. 18.

[33] Gleick J., *The Information: A History, A Theory, A Flood*, (Harper Collins e-books, 2011), Kindle DX Version, Prologue.

[34] Hayles describes the development of these beliefs that emerged in a series of conferences in the 1940's and 1950's on the emerging science of cybernetics, op. cit., Ch. 3.

[35] In this I agree with Hobart and Schiffman's position that information emerged with writing. op. cit., pp. 2-5.

[36] Some of these influences are discussed in Mclaren G., 'Unifying Process Philosophy: Secular Metaphysics and Fragmentary Influences', in *Applied Process Thought I: Initial Explorations in Theory and*

while process philosophers see these theories as justifying the existence of multiple levels of reality, all moving, interrelated and co-evolving with each other, analytic thinkers, those who see inert matter as primary, will often see them as reducing our universe to just one level of reality, that of information. For them, information is therefore reified and becomes the Platonic Form of our time (although one that doesn't have any form) leaving emergent structures such as living organisms and consciousness as mere epiphenomena, lesser forms of reality if at all. For process thinkers this is an act of disembodiment and an example of committing what Alfred North Whitehead calls, 'the fallacy of misplaced concreteness.'[37]

Of course, saying that information has become a Platonic Form, albeit a formless one suggests that this is not a new problem. As I have discussed, philosophers since ancient times have created virtual realities in their imaginings and many have mistaken them for the primary level, the foundational level, Plato's world of Being and Descartes' coordinate geometry being perhaps two of the best examples. Michael Heim also includes Liebniz and his theory of monads in this group.[38] The question could be posed, however; am I as a process philosopher, doing the same thing by regarding process as primary? In a sense, yes, because all living organisms collapse the complexity of our universe into emergent simplicities in order to act at all. The difference is, however, that analytic thinkers, like Descartes, privileging sight, believe that in these emergent simplicities they have identified primary reality as something clear and distinct. On the other hand, process philosophers, emphasizing aural metaphors, argue for the existence of real vagues. For example, we all have a sense of the dynamic and complex nature of reality, like when we watch our children grow or admire a work of art but can't work out why we like it when the person next to us hates it, but we understand that the more we try to determine the exact nature of reality the more complex it becomes. It is this vagueness that frustrates and antagonizes non-process thinkers despite still underpinning our scientific endeavours.[39] It is a reality we must come to terms with, however, if we are to better understand the true nature of reality.

Practice, Mark Dibben and Thomas Kelley (eds.), (Ontos Verlag, Heusenstamm, 2008), Chapter 1, pp. 43-118.

[37] Whitehead uses this primarily in relation to those scientists who believe in the primacy of simple location in Whitehead A. N., *Science and the Modern World*, (The Free Press, New York, 1967), pp.50-51.

[38] Heim M., op. cit. Ch. 7.

[39] The inability of science and mathematics to overcome this despite their committed efforts is revealed in Gare A., 'Mathematics, Explanation and Reductionism: Exposing the Roots of the Egyptianism of European Civilization, in *Cosmos and History: The Journal of Natural and Social Philosophy*, vol. 1, no. 1, 2005, *p. 54-89.*

What I am suggesting is that those who have come to believe in the primary reality of abstract, disembodied information have lost their sense of reality. They have reified misconceptions of the nature of reality and these have become the conditions for inverting reality such that virtual realities, the products of imagination, have become the really real. This does not mean that virtual reality is not real in some sense. Process thinkers transcend the idealist/materialist dichotomy. Because, both material structures and ideas are the products of processes, both are as real as each other and have what is called a downwardly causative effect, or act as constraints.[40] An idea can constrain a whole culture, causing it to flourish or disintegrate in the same way that a rainforest canopy constrains life on the forest floor. The problem emerges when a particular, relatively simple idea, such as information, is reified and becomes the basis of reality for a culture. The culture then becomes primarily constrained by an abstract representation of reality which, in the case of information, is an oversimplified misconception of what primary reality is. What is the nature of this misconception which Hayles' argues constrains our culture?

QUANTITY OVER QUALITY

Since the invention of writing from accounting practices and particularly after the phonetic alphabet created a visual representation of sound, information has always had the advantage of appearing seemingly more clearly definable and measurable, qualities most valued by analytic thinkers. Today, the digital technologies which generate our virtual worlds use highly abstract binary logic which is mathematically expressed and quantifiable.[41] In the case of language using the phonetic alphabet, this amounts to an abstract mathematical binary code representing an abstract symbol which represents a sound that is made to represent, perhaps, an object in the world; perhaps not so simple. According to Lanier, this privileging of quantity has led to a rejection of the notion of quality among computer technologists who have come to see everything in computational terms and are unable to accept anything other than absolute order. From this, the view has emerged that quality is a mere by-product of quantity or that '…quantity not only turns into quality at some extreme of scale, but also does so according to principles we already understand.[42] According to Lanier, this is what is behind the faith of those behind organizations such as Google that artificial intelligence will emerge from sheer quantity of data, as well as Ray Kurzweil's posthumanist belief that accelerating towards more technology will allow

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[40] McLaren G., op. cit, pp. 66-68.

[41] The nature of Boolean logic is discussed in Heim M., op. cit. Ch. 2.

[42] Lanier J., op. cit., p. 49.

us to outrun problems such as global warming.[43] Another recent example is 'The Meaning Machine' created by Mark Zuckerberg for Facebook users in which the quality of meaning is calculated through an algorithm based on the quantity of information one puts on their Facebook site. According to Madrigal:

> The Meaning Machine relieves you of the struggle to examine your experience of the world. You only need to post status updates and photos. Just *live life* and record it in social media. The Meaning Machine takes it from there. Feel the algorithm![44]

According to Lanier, this reduction of quality to quantity has also sparked a revival in the discredited epistemological theory of logical positivism, the theory which Nik Hassan argues underpins the deception in today's Information Systems field, that technology is neutral.[45]   Lanier, however, one of the creators of virtual reality technologies, rejects the notion that quality equals quantity and suggests that quality cannot be simply reduced to bits.[46]

There are others, such as Nicholas Negroponte, who also support the view that quality equals quantity in arguing that a new decentralized, global harmony will emerge from a totally digitally networked world.[47]   Those of us, however, who understand the history of philosophy, will know that this way of thinking is deluded and that Lanier is right. Quality does not emerge simply from quantity; it emerges in relation to the action of constraints. In cybernetic terms one only has to look at how negative feedback loops are just as important in the integrity of structure as positive ones. But let us look at the qualities of truth and justice as an example. You only have to look at the story of Socrates in *The Apology* and the philosophical quest for truth and justice that it inspired, to understand that in most societies few are even interested in truth and justice in any deep sense. For most, truth and justice are not abstract concepts requiring deep understanding in order to appreciate their meaning and significance; they are simply assumed. A deep understanding of truth or justice will not emerge from a growing and fully networked population who are not interested. As Aristotle similarly argued in his *Nichomachean Ethics*, good behavior is

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[43] Ibid. Reference to Google is on pp. 48-51. Reference to Kurzweil is on p. 181.

[44] Madrigal A., 'The Meaning Machine', *The Atlantic*, October 29, 2011 at http://www.theatlantic.com/technology/archive/2011/09/the-meaning-machine/245757/, (Accessed 29/10/2011)

[45] This arguments is in Hassan N. R., 'New Approaches to Studying Information Technology: Escaping the Organizational Straitjacket', *Informing Science Journal*, Vol. 9, 2006, at http://inform.nu/Articles/Vol9/v9p243-258Hassan91.pdf, (Accessed 18/2/2012), p. 248.

[46] Lanier J., op. cit., pp. 154-157.

[47] Negroponte N., *Being Digital*, Online Edition, (15/4/1996) at http://archives.obs-us.com/obs/english/books/nn/ch19epi.htm, (Accessed 30/8/2011), Ch. 19.

not associated with having more of everything but is achieved by having the right balance between excess and deficit, the quality of the 'Mean.' Those, such as Socrates and Aristotle, who are committed to deep understanding are that way because they have constrained themselves to be authentic; they have valued quality as much as quantity. It is such deep thinkers who then come to represent the highest standards of quality.

What is ignored by those who value and give primacy to quantity and the products of logic and mathematics which measure everything, is that these products themselves are generated by processes which are more complex and difficult to define. Using our counting machines, however, has become so much easier than having to deal with these vagaries or qualities, particularly the emergent complex oscillating processes in the form of living organisms. What is perhaps most troubling though is that along with the misconception that information is primary and more is better comes the misconception that the bit, like God, is immutable, immortal and all-powerful. Information, therefore, for those who believe in such absolutes, becomes a foundation for the illusion of total control over natural processes. For those who do believe this, such as posthumanists like Ray Kurzweil, it makes realizable the dream of becoming Neo from 'The Matrix', a super-being capable of manipulating and controlling the primary binary information of the universe, the ultimate expression of negative freedom, or freedom from any constraint. By manipulating abstract, disembodied information, for example, we can, like engineers, attempt to dampen or flatten oscillating systems such as day and night, summer and winter, youth and maturity and life and death. We do this, I suggest, to create a world in the image of information; a world that is immortal, immutable, analytical and totally predictable. These are not the necessarily far-from-equilibrium conditions for life, however, argued for by process philosophers, but are, in thermodynamic terms, the tendency towards heat death.[48] We can also now understand them as the conditions for dysfunctional virtual realities; virtual worlds which draw us in then transform us in to schizophrenics effectively destroying our capacities for escape.

For those who are trapped, finite organisms and their complex nature can be ignored and time can be spent simply measuring and manipulating infinite disembodied information to create whatever their imaginations can conceive; at least for as long as they have imagination, for as was revealed at the beginning of this paper, these are not the conditions for imagination to flourish but to atrophy. As

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[48] For the argument against the creation of a flatland and for the need to respect vibratory processes, see McLaren G., 'Climate Change and Some Other Implications of Vibratory Existence', in *Cosmos and History*, Vol. 5, no. 2 (2009), pp. 134-160.

McGilchrist would argue, those trapped would eventually pathologically spend their time simply and seemingly endlessly repeating the same activity. The schizophrenic nature of these worlds, reveal that many of us have become so immersed in dysfunctional virtual imaginings that they are unable to create any critical distance. Rather than engaging in *mimesis* as I understand it, they are unknowingly committing fraud. But perhaps they are being conned out of reality by the fraudulent promise of something better. Here we need to discuss some other broader influences.

SOCIETY OF THE SPECTACLE

The internet consists of dysfunctional virtual worlds in which more and more of us spend our time manipulating, abstract, disembodied information. Like daydreams, these worlds allow us to briefly transcend our physical and biological realities but unlike daydreams, they are able to give form to our imaginings in ways which previous generations could not have conceived of. The smooth, efficient and perfectly logical flows of information underpinning the internet are, however, the products of the complex reality of contradictions and paradoxes. For example, the internet emerged from its military applications to become a civilian network thanks to a strange collaboration between modernism and postmodernism. Harkin relates the fascinating story of how disaffected hippies in the 1960's became attracted to the reductionist theories of cybernetics developed by Norbert Weiner and through this, the philosophical musings of Marshal McLuhan, a devout, conservative Catholic strongly influenced by cybernetics. This led to them embracing an information technology that for the hippies would subvert the status quo of global communications and for McLuhan, would lead us to a global spiritual unity.[49] Much of this hope was subverted after Bill Gates turned the internet into cash, but more questions are now being raised as to how subversive and unifying the internet really is.

For example, the optimism of cyber-utopians such as Nicholas Negroponte, that a fully networked world through the internet will create a new democratic world order has been dampened by Evgeny Morozov. According to Morozov, this faith now determines U.S. foreign policy to the extent that the US State Department has become more interested in spreading democracy through cyberspace, rather than doing the hard work of deeply understanding the complex, socio-political history of other cultures. [50] The assumption is, consistent with beliefs that quantity equates to quality, that the more digitally networked the world will become the more

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[49] This is in Harkin J., op cit., Ch. 3.
[50] Morozov E., *The Net Delusion: The Dark Side of Internet Freedom*, (Public Affairs, Philadelphia, 2011), pp xii-xiv.

unsustainable authoritarianism will be. The logic is, as Morozov suggests, '…let them tweet, and they will tweet their way to freedom.'[51] However, cracks are starting to appear in this virtual construct as those such as Morozov argue that the subversive and spiritually unifying potential of the internet is not being realized. He highlights the dark side of global internet use revealing many deliberately fragmenting uses by anti-democratic forces such as the 'digital purge' conducted by Iranian authorities after the protests of 2009.[52] Also, Gerhards and Schäfer argue against those who see the internet as the new 'public sphere.' According to them, the ideal of 'the public sphere' as developed by Jurgen Habermas, a condition for democracy, has no more chance of being realized on the internet as it was through the traditional mass media due to the over-constraint of search engines. They argue that:

> …search engines might actually silence societal debate by giving more space to established actors and institutions, to experts and to expert evaluations and views, thereby replicating pre-existing power structures online. This manner of actor and content selection might be even inferior compared to the old (and already often criticized) mass media, because the latter at least employ journalistic norms like balanced reporting and neutrality when selecting actors and statements, and thereby present a possibly better communication than the internet.[53]

The internet as we know it today did not emerge until the 1990's and while many speculated on its impact it is only now, retrospectively, that its impact is starting to be seriously examined. On one level the internet appears to be the product of a 'mash-up' of contradictory ideas. However, as processes evolve they become more constrained. These contradictory ideas, therefore, can be understood at a higher level of organization, as the oscillating processes which generate and unite all in what Arran Gare argues, is a grand narrative of disembodiment, a grand narrative that goes back to Plato and is now equally contributed to by both modernists and postmodernists as the virtual worlds of the internet come to mediate more and more of our relationships. As Gare argues:

> Modernism has been characterized by the quest to overcome and leave behind the constraints of the material world. Deconstructive postmodernists, purportedly leaving behind modernity, claim that there is nothing but an endless

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[51] Ibid, p. xii.

[52] Ibid, p. 10.

[53] Gerhards J. and Schäfer M. S., 'Is The Internet a Better Public Sphere? Comparing Old and New Media in the US and Germany', *New Media and Society*, XX(X),2009 at http://www.polsoz.fuberlin.de/soziologie/arbeitsbereiche/makrosoziologie/mitarbeiter/lehrstuhlinhaber/dateien/GerhardsSch__fer-New-Media-And-Society.pdf, (Accessed 15/10/11). P. 14.

play of signifiers which are not only disconnected from any base in reality, but the idea of such a base is nothing but an illusion created by this play of signifiers. They are even more completely enmeshed in the grand narrative of disembodiment than the modernists. This grand narrative of disembodiment, which is really a fetish serving to force on third parties actual processes of disembodiment that deprives them of their surrounding embodied forms and often their own bodies, is now embodied in people's *habitus*, in their whole way of life, in their institutions and, most importantly, in the ends they aspire to. Progress, identified with economic growth, is seen to be moving towards a dematerialized economy.[54]

Gare argues that reality has been inverted such that those who conduct their lives furthest from reality are now the most rewarded. As I will now discuss, this inversion is a product of the relationship between posthumanism, postmodernism and neo-liberal economic theory. This reveals that the internet, far from being subversive and unifying, is fragmenting in a way which serves the interests of the status quo; those who represent the grand narrative of disembodiment. It does this, I argue, by privileging disembodied over embodied experience and by decreasing our capacity for critical thought and deep self-reflection.

As I suggested earlier, when the internet first emerged some hoped for it to be both subversive and anarchic, but that seems to be far from the truth. The emerging critical discourse on the internet, much of it coming from those who were at the forefront of the internet's development, are revealing it to be a highly organized means for integrating the world into what French Philosopher Guy Debord called, 'the society of the spectacle'.[55] The society of the spectacle is one in which all of reality is reduced to simulations, where the virtual becomes the real, lies become the truth and where all become integrated into a virtual world where all is controlled, all is measurable and all is for sale. Debord, from a Marxist perspective, was critiquing the evolving nature of capitalism in the mid-20th Century and was concerned that society was devaluing authentic experience, replacing it with commodity fetishism and alienation. Debord's capitalist world was in the process of being shaped by the atomistic, free-market economic theories of neo-liberalism associated with The Mont Pelerin Society and The Chicago School of Economics.[56] According to Michael

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[54] Gare A., 'Beyond Modernism and Postmodernism: The Grand Narrative of the Age of Re-Embodiments,' 2012 (forthcoming).

[55] Debord G., *The Society of the Spectacle*, K. Knabb trans., (Rebel Press, London, 1983).

[56] Michel Foucault traces the emergence of neo-liberalism to 'The Walter Lippmann Colloquium' held in France in 1939 in Foucault M., *The Birth of Biopolitics: Lectures at the College de France 1978-1979*, Michel Senellart (ed.), (Palgrave MacMillan, Hampshire, 2008), p. 132. In 1947 in Switzerland, The Mont

Hudson, neo-liberalism was promoted after the Second World War by the U.S. and the International Monetary Fund to strengthen the U.S. Empire, particularly after it became a global debtor, and it has now become economic orthodoxy in business, government and universities. As Hudson emphasizes, however, the U.S. never fully adopted the free-trade policies it was promoting to others, maintaining one of the world's most protected economies.[57] As George Monbiot argues, therefore, neo-liberalism, like Parrhasius' painting, is fundamentally an exercise in deception, an example being the way it appropriates the language of anarchy and opposition to state oppression while its primary agenda is to support the interests of wealthy elites, which it has succeeded in doing as wherever it has been implemented wealth has shifted to the hands of the top one percent of the population.[58]

This duplicity has also been revealed by Michel Foucault. He argues that whereas theories of liberalism were concerned to create a free space for the market within political societies:

> The problem of neo-liberalism is rather how the overall exercise of political power can be modeled on the principles of a market economy. So it is not a question of freeing an empty space, but of taking the formal principles of a market economy and referring and relating them to, of projecting them on to a general art of government.[59]

Foucault's distinction is important because it reveals that neo-liberalism, rather than being the path to negative freedom through an attitude of *laissez faire,* individual autonomy and opposition to government as it is often characterized, seeks to create a cooperative relationship between business and government to create oppressive order. It is business creating a world for business while at the same time marginalizing all human activity which is not business related.[60] This is because, as Pierre Bourdieu argues, this economic orthodoxy has now become political orthodoxy, the holder of

Pelerin Society was founded by Friedrich von Hayek along with several Chicago School economists including Milton Friedman.

[57] This is in Hudson M., Super Imperialism: The Origin and Fundamentals of U.S. World Dominance, New Edition, (Pluto Press, London, 2003).

[58] Monbiot G., 'How the neoliberals stitched up the wealth of nations for themselves', *The Guardian*, 28/8/2007 at http://www.guardian.co.uk/commentisfree/2007/aug/28/comment.businesscomment, (accessed 20/9/2011).

[59] Foucault, op. cit., p. 131.

[60] According to Nussbaum this business world has also infected today's universities in Nussbaum M., *Not for Profit: Why Democracy Needs the Humanities*, (Princeton University Press, Princeton, 2010). The link between neo-liberalism and the transformation of universities into transnational corporations is effectively made by Gare A., 'The neo-liberal assault on Australian universities and the future of democracy : the philosophical failure of a nation', *Concrescence : the Australasian Journal of Process Thought*, Vol. 7, no. 1 (2006), p. 20-30.

symbolic capital which justifies its subversion of the autonomy of all other fields.[61] It is with the complicity of government institutions therefore, that neo-liberal ideology achieves its goals. Arran Gare reveals some of these institutions and the neo-liberal goals they seek to impose in arguing that:

> Under the influence of economists (and the pressure of transnational corporations), the IMF, the World Bank and the WTO are imposing market relations on virtually every facet of social, political and cultural life. This involves deregulating markets, freeing trade, removing impediments to capital mobility, privatizing public assets, applying the "user pays" principle to allocate resources, applying economic principles to government and measuring success in purely "economic" terms.[62]

It is also neo-liberalism which underpinned the development in the late 1970's of supply-side or 'voodoo' economics. Not only did this reduce taxes for the rich, but by creating consumer demand rather than responding to it, it resulted in the flooding of the world with trivial products, the accelerated destruction of natural environments through increased throughput and the legitimization of the primarily deceptive activities of marketers and advertisers.[63] It perhaps also contributed to the development of the internet as a commodity.

The great irony of neo-liberalism is that while, as argued earlier, it was created by essentially conservative thinkers seeking to preserve power in the hands of the rich, it became, as Strickland suggests, 'the hegemonic ideology of postmodern consumerism.'[64] Strickland reveals important links between neo-liberalism and posthumanism in the tendency in neo-liberalism to 'obscure the relations of production of contemporary capitalism.'[65]According to him:

> …neoliberalism argues that we have entered a new phase of capitalism in which information processing is more important than material production. In the new information-driven economy, it is asserted, technological breakthroughs (primarily the development of virtually instantaneous global communications) have enabled the compression of time and space such that a surplus of material

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[61] This is in Bourdieu P., 'Utopia of Endless Exploitation: The essence of neoliberalism, What is neoliberalism? A programme for destroying collective structures which may impede the pure market logic', at http://mondediplo.com/1998/12/08bourdieu.

[62] Gare A., 'Ecological Economics and Human Ecology', *Handbook of Whiteheadian Process Thought*, Weber M. and Desmond W.(eds.), Vol. 1, p. 161.

[63] The links between neo-liberalism and supply-side economics are outlined in Steger M. B. and Roy R. K., *Neoliberalism: A Very Short Introduction*, (Oxford University Press, Oxford, 2010), Ch. 2.

[64] Strickland R., 'Introduction: What's Left of Modernity', in *Growing Up Postmodern: Neoliberalism and the War on the Young*, Strickland R. (Ed.), (Rowman and Littlefield Publishers Inc., Maryland, 2002), p. 2.

[65] Ibid, p. 3.

wealth is produced, making basic "needs" increasingly irrelevant for more and more people, and elevating "desire" as the principal concern of the postmodern subject…But they tend to assume that industrial production has disappeared, when actually it has simply been restructured and relocated.[66]

In this, we see the agendas of neo-liberalism, postmodernism and posthumanism align in the quest for negative freedom. Today's society of the spectacle is revealed as a world of virtual superficiality in which the postmodernists and posthumanists can live their dreams now thanks to the internet acting as an accelerant on economic activity. The world they inhabit, however, is like a Hollywood movie set. Once one peers behind the cardboard structures, the true neo-liberal reality is revealed; that most must be exploited to maintain both the illusion of control for the posthumanist few and the powerbase for the wealthy elites. As was argued earlier in relation to Gare, this is a world in which those who live furthest from reality are most rewarded and become, not positive constraints creating the conditions for life to flourish, but macroparasites, engorging themselves at other's expense. Underlying all of this is the deep-seated belief that like bits, individual consumers are the primary units of economies, that life for most is both, mechanical and a Darwinian competitive struggle for survival and that ultimately, information is primary. It is Huxley's *Brave New World*, a virtual world where critical thought and the deep search for meaning, is replaced by mindless work, trivial entertainments and stupefying drugs.[67] It is a virtual world, however, presented with such hi-fidelity and with such appeal to the postmodern principal concern, desire, that *mimesis,* the ability to critically distance one's self and reveal the illusion becomes difficult, if not impossible. It is therefore a world devoid of critical thought in which all are integrated and where there is no resistance.

But what does it mean to be integrated and how is the internet facilitating this? The high-speed connectivity of the internet acts as an accelerant on economic activity and innovation moving us into a seemingly pre-determined future at such a speed that critical thought cannot keep up. This results in a world mainly comprised of the integrated. I understand these integrated in relation to what Umberto Eco referred to as the difference between the integrated and the apocalyptic intellectual in relation to their intellectual approaches to mass culture. He argues that:

Whether this culture emerges from below or is processed and packaged from above to be offered to defenceless consumers is not a problem that concerns the

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[66] Ibid, p. 3.

[67] Huxley's world is also one in which those who read Shakespeare, are regarded as savages. Huxley A., *Brave New World*, (Penguin, Middlesex, 1969).

integrated intellectual. Not least because, if apocalyptics survive by packaging theories on decadence, the integrated intellectuals rarely theorize. They are more likely to be busy producing and transmitting their own messages in every sphere, on a daily basis. The apocalypse is a preoccupation of the dissenter; integration is the concrete reality of non-dissenters. The image of the apocalypse is evoked in texts on mass culture, while the image of integration emerges in texts which belong to mass culture.[68]

Drawing on these themes, Pierre Bourdieu, argues that the neo-liberalism underpinning our society of the spectacle thrives thanks to mindless support from integrated intellectuals, what he calls 'Doxosophers', borrowing from Plato.[69] These 'new intellectuals', as Bourdieu also calls them, or what I would call, 'psuedo-intellectuals', operate as 'technicians of opinion', but it is uncritical opinion without technical content aimed at supporting the status quo. What is implied by Bourdieu and Eco, I argue, is that a condition for critical thought is to be at least somewhat apocalyptic. You must have developed a sense that something is wrong or could be better in your world. This sense is usually developed through suffering existential and epistemological crises as we grapple with the inherent indeterminacy and unpredictability of life. Against this background we learn to project and construct possible futures, virtual realities as I discussed before, but we do so knowing them to be potentialities, not actualities; as guides to possible futures, not destinations. We become critical thinkers through the knowledge that the past can be re-interpreted and future events changed.

This is not the case for the integrated. If you are integrated, in this sense, there is no point to critical thought; no point to examining the past or developing utopian or dystopian visions of the future. Like the postmodernist characterized by Frederick Jameson, as well as McGilchrist, the integrated are like schizophrenics locked in to an eternal present.[70] This eternal present can be continually generated by artificial environments in which there is no change, such as consumer malls, computer virtual worlds or through a deluded perception that all is pre-determined. Paradoxically, this eternal present is a world of fragments, or perhaps, bits of data; a world in which coherent narratives break down linking the past with the future and we become disoriented and lose integrity. This is then the condition for the integrated to be

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[68] Eco U., quoted in Caesar M., *Umberto Eco: Philosophy, Semiotics and the Work of Fiction*, (Polity Press, Cambridge, 1999) p. 38.

[69] This is in Bourdieu P., *Acts of Resistance: Against the New Myths of Our Time*, (Polity Press, Cambridge, 1998), p. 7.

[70] Jameson F., 'Postmodernism and Consumer Society', in *Postmodern Culture*, Foster H. (Ed.), (Pluto Press, London, 1983).pp., 111-125.

unable to act other than how they have been conditioned to act. It is perhaps a case of hyper-coherence or autism, where rigid behaviours develop in response to information overload. Those apocalyptics who do sense problems and raise questions in such an environment, however, are regarded as the crazy ones. The world of the integrated is only interested in what is, not what was or what could be.

PROBLEMS FOR CIVILIZATION AND PHILOSOPHY

A world with no past or future, I argue, cannot be a civilized one but one that has perhaps, in McGilchrist's terms, suffered a right brain hemisphere stroke. But this argument may depend on how civilization is understood and what its relationship is to philosophy. The etymology of the word, civilization, refers mainly to the condition of being a townsperson and the sorts of courteous and polite behaviour required for large numbers of citizens to live together in close proximity. Since the late 18th Century it has been used in opposition to barbarity, or the conditions of savage cruelty, rudeness or ignorance.[71] With more of us living in close proximity in large cities than ever before and more and more of us inhabiting digital virtual worlds together, civilization in its original senses seems more needed than ever before. These should not be construed, however, as the conditions of a Hobbesian 'Social Contract' in which individuals agree to become subjects in their own self-interest to gain protection from others, but the conditions for flourishing in which, having cooperatively met immediate needs for survival, individuals and communities can actively seek and realize higher levels of development. Like development processes in general, civilization in this sense, I suggest, is not a state but a vibrating process, or dynamic tension. One way of understanding this is through John Armstrong's rather simple definition of the conditions of civilization being, '…when a high degree of material prosperity and a high degree of spiritual prosperity come together and mutually enhance each other.'[72] Spiritual prosperity, for Armstrong, is defined by the quality of our inner lives and requires '…depth of thought, feeling or experience; attachment to higher things; and mental *space* or *breadth* of mind.'[73] From a process philosophy perspective, these conditions can be conceived as a small amplitude oscillation continually created and maintained between material and economic development and intellectual and emotional development in which flourishing can emerge. Too much focus on material development provokes deluded, supernatural

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[71] This is from The Online Etymology Dictionary at http://www.etymonline.com/index.php?allowed_in_frame=0&search=Civilization&searchmode=none.
[72] Armstrong J., *In Search of Civilization: Remaking a Tarnished Idea*, (Allen Lane, London, 2009), p. 187.
[73] Ibid, p. 165.

forms of spiritualism while too much focus on spirituality provokes a swing to extreme forms of nihilistic mechanistic materialist thought. As Armstrong, suggests, the problem for civilization today is an imbalance caused by a focus on the material and neglect of the spiritual. Missing from Armstrong's two part model, however, is a third, context. In line with both McGilchrist and Carr, this neglect of intellectual and emotional development can be understood as being associated with the current context of internet use and at a deeper level, related to the left hemisphere dominated materialistic and analytic thought underpinning the grand narrative of disembodiment.

Similarly to Armstrong, Arran Gare argues that civilization emerges within conditions conducive to deep self-reflection, as was evident in the transformation of the Ancient Greeks from barbarity to civilization. This transformation would not have been possible without the understanding of those, such as the pre-Socratic Philosopher, Heraclitus, that the mind has infinite depth. As Gare states:

> Essentially, this depth refers to the dimension opened up by self-reflection, and more importantly, the capacity for self-refection. This is what was called for in the injunction to 'know thyself' inscribed in the *pronaos* (forecourt) of the Temple of Apollo at Delphi. This seems to call for reflection on oneself as an individual, but such reflection is only one component of self-reflection. Reflection by Greeks on themselves as individuals developed with reflection on their institutions. Striving to know oneself as an individual both requires and leads to this broader self-reflection.[74]

The conditions, therefore, for broader self-reflection in which the social institutions of civilization emerge are associated with the conditions for deep self-reflection. Paradoxically, these conditions were originally created through the invention and development of advanced forms of information technologies. This is the story of the emergence and development of literacy and its displacement of oral culture. It is these conditions, such as the emergence and development of the Greek phonetic alphabet, which are seen as central to the emergence of advanced philosophy in Ancient Greece.[75] The argument, therefore, linking the development of deep self-reflection with that of civilization, supports the argument for there being a co-dependent relationship between civilization and philosophy, philosophy understood as the practice of deep self-reflection, the condition for our ability to think

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[74] Gare A, 'Barbarity, Civilization and Decadence: Meeting the Challenge of Creating an Ecological Civilization', in *Chromatikon V: annuaire de la philosophie en proces (Yearbook of philosophy in process)*, M. Weber and R. Desmet (eds.), (*Presses universitaires de Louvain*, 2009) pp. 167-189.

[75] The argument linking the emergence of philosophy with the development of the Greek alphabet is summarized and supported in Hobart M. E. and Schiffman Z. S, op. cit.,Ch. 3.

synchronically. Civilization, requires literate philosophers to continually conceive of the necessary conditions for philosophy to thrive. It is not enough to just conceive of these conditions, however, but to argue for it, or engage in dialectic. This is the condition of *agon,* the word used to describe the competitive or agonistic nature of Ancient Greek society which saw citizens competing in everything from wrestling to philosophical debate and where the quality of victory was measured by the quality of the opponent. As Huizinga argues, *agon* is a form of play and play is the 'civilizing force.' He states that:

> During the growth of a civilization the agonistic function attains its most beautiful form, as well as its most conspicuous, in the archaic phase. As a civilization becomes more complex, more variegated and more overladen, and as the technique of production and social life itself become more finely organized, the old cultural soil is gradually smothered under a rank layer of ideas, systems of thought and knowledge, doctrines, rules and regulations, moralities and conventions which have all lost touch with play. Civilization, we then say, has grown more serious; it assigns only a secondary place to playing. The heroic period is over, and the agonistic phase, too, seems a thing of the past.[76]

Huizinga reveals here the dynamic, oscillating nature of civilizations and their drift into ossification without continual argument and openness to alternative thought.

The condition of dynamic tension that creates the integrity of civilization requires the conditions of what the Ancient Greeks referred to as *phronesis,* or practical wisdom, which was achieved through experience and education in the arts, sciences and virtues, or *paedeia,* and dialectic, with the ultimate goal being the achievement of *eudemonia,* the good life.[77] How do philosophers achieve *phronesis?* Ironically, as I have discussed, it is through the ordering abilities we all have to conceive of virtual realities, levels of reality which seek to mimic the realities people inhabit, but are enhanced or degraded relative to them. It is these virtual realities, in the form of imaginative anticipations of possible futures, which can play out better or worse scenarios than already exist; utopias and dystopias. The greatest tool philosophers use to achieve *phronesis,* therefore, is imagination. History reveals, however, that many philosophers have become lost in their imagination. The levels of virtual reality they have created in order to understand reality they have mistaken for absolute reality. In other words, they have taken for reality that which they posited as potential in order to further their understanding. Today, the further problem exists in that we have developed the

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[76] Huizinga J., Homo Ludens: A Study of the Play-Element in Culture, (Beacon Press, 1971), p. 75.

[77] The relationships between these three concepts are perhaps best explained in Aristotle's Nicomachean Ethics, Book VI.

technological capability to use machines to construct virtual realities of previously unimaginable fidelity. This has made it even more difficult for us not to get lost in our imagination. So while philosophers must actively use their imagination to practice *phronesis*, such wisdom comes from recognizing the potentials offered by virtual realities, not from their reification.

It is the reification of our imagined virtual realities which has the potential to destroy the conditions for civilization by subverting our capacity for imagination, particularly our historical imagination which allows us to situate ourselves within civilizing traditions and compare them to barbaric ones. As Niall Ferguson argues; 'At its core, a civilization is the texts that are taught in its schools, learned by its students and recollected in times of tribulation.'[78] The continual creation and maintenance of civilization primarily requires education in history, literature and philosophy. In times of tribulation, as Ferguson describes it, when civilization is under threat, it will be our ability to draw on a deep understanding of our history of ideas which will enable us to create a civilized future. Such an education will require high levels of literacy skills, at least as much as those which enabled civilization to be created in the past. As Walter Ong famously argues, however, the emergence and development of digital information technologies such as the internet is creating an era of 'secondary orality' and it is this, I suggest, which is actually undermining literacy and insidiously transforming us into virtual reality integrated schizophrenics, obsessively hunting and gathering data with no idea of why.[79] It is this triumph of virtual reality which must be actively resisted.

NEOTENY

Finally, if Carr and McGilchrist are right, then what we are seeing is an institutionalized retardation of human development. But, the nature of retarded development is complex and is as much about quality as quantity. This is because, according to theories of neoteny, it is retarded development which is the condition for the emergence of human levels of consciousness and intelligence. This was argued by Stephen Jay Gould in his seminal work, *Ontogeny and Phylogeny*, which looks at the relationship between immature and mature stages of development in living organisms.[80] Gould argues that the key to human evolution, what makes us distinct from other creatures, is the correlation of delayed maturation with retarded somatic

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[78] Ferguson N., *Civilization: The West and the Rest*, (Allen Lane, London, 2011) Kindle DX Version, Conclusion.

[79] Ong W., *Orality and Literacy*, (Routledge, New York, 2002).

[80] Gould S. J., *Ontogeny and Phylogeny*, (The Bellknap Press of Harvard University Press, Cambridge, 1977).

development.[81]   In other words, development is related to its timing and humans emerge into their worlds relatively under-formed relative to other organisms and go through a longer maturation process.   While we are more vulnerable and require more nurturing and protection than other organisms at early stages, this ultimately has the benefit of providing us with greater evolutionary flexibility.[82]   These extended and complex maturation processes have been extensively examined within the field of developmental psychology.

Lanier extends the concept of neoteny to cultural development, particularly the evolving relationships between people and information technology.   He also suggests that rates of neoteny change over time relative to this relationship.   For example, he argues that:

> The phase of life we call "childhood" was greatly expanded in connection with the rise of literacy, because it takes time to learn to read.   Illiterate children went to work in the fields as often as they were able, while those who learned to read spent time in an artificial, protected space called the classroom, an extended womb.[83]

This is an over-simplification but it highlights the importance to human development of the particular information technology of print and the increases in literacy associated with it.   As Elizabeth Eisenstein, together with McLuhan, Ong and Hobart and Schiffman argue, print had a revolutionary effect like no other in accelerating human knowledge and understanding.[84]   I argue that this is due to the relationship between print and *mimesis*.   Like the phonetic alphabet, print is so abstract, so alien to the reality of the natural world, so 'hot', as McLuhan would say, that the printed word continually poses questions as to its relationship to reality.   It is these questions which generate imagination and which create the conditions for the epistemological and existential crises required to motivate deep self-reflection and critical thought.   It is such deep self-reflection which then creates possibilities for transcendence.   Neotony reveals that the quality of maturity is not a quantifiable linear process but a dynamic balance, or perhaps dialectic, between retarded development and its transcendence. Print, in its relationship with *mimesis,* helped give us the ability to abstract ourselves enough from the narratives we are living in order to recognize our immaturity.

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[81] Ibid., p. 345.

[82] Gould's theory has been supported by more recent studies such as Somel M., et. al., 'Transcriptional Neoteny in the Human Brain', *PNAS*, Vol. 106, No. 14, (April, 2009), pp. 5743-5748.

[83] Lanier J., op. cit., p. 180.

[84] Eisenstein E., *The Printing Press as an Agent of Change*, (Cambridge University Press, Cambridge, 1979). Ch. 1.

While the illiterate child working in the field matures early, their potential for further transcendence is limited. Alternatively, print culture and literacy created the extended womb. otherwise known as education, the conditions in which humans develop more slowly but with relatively vast capacities for transcendence to higher stages of intellectual development. As has been argued by developmental psychologists, such as Ken Wilber, it is at the highest stages of intellectual development where a deep understanding of the relationship between abstract concepts and primary reality is achieved.[85] The path to such development however can be treacherous. The gap created by information technologies such as print between abstract concepts and primary reality is not always bridged, leaving many fragmented and lost in abstractions. It is these lost ones who exhibit left hemisphere dominance and embrace and dogmatically defend misconceptions such as those associated with posthumanism, promoting total integration with machines such as the internet. The internet, however, as I have shown, is an information technology which draws us in rather than aids abstraction. It creates 'secondary orality', a 'post-literate' culture in which some characteristics of oral cultures re-emerge informed by print.[86] Rather than aiding transcendence, I argue, this threatens to destroy all that civilization and education has achieved, devolving us to once again become illiterate children in the field.

Paradoxically, this is evident today in our increasing dependence on technology which is increasing neoteny such that the gap between our mental development and chronological age is widening. This suggests a lack of transcendence of immature stages. According to Lanier, this is having two disturbing effects. One, is that generational cultural change slows down as the influence of older generations, such as 'Baby-boomers', is drawn out, stifling the emergence of youth cultures. The other is what Lanier calls, 'silicon juvenilia', evident in the billions of dollars invested each year in companies producing trivial products. He argues that:

> At these companies one finds rooms full of MIT PhD engineers not seeking cancer cures or sources of safe drinking water for the underdeveloped world but schemes to send little digital pictures of teddy bears and dragons between adult members of social networks. At the end of the road of the pursuit of technological sophistication appears to lie a playhouse in which humankind regresses to nursery school.[87]

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[85] Wilber manages to synthesize the whole tradition of development psychology in putting forward his theories of human development. Wilber K., *A Brief History of Everything*, (Shambala Publications Inc., Boston, 1996).

[86] Ong W., op. cit.

[87] Lanier J., op. cit., p. 182

This playhouse is not the civilizing conditions of *agon* I discussed earlier, but play trivialized in relation to the so-called serious business of neo-liberal supply-side economics aimed at infantilizing humans for profit, a product of those immature enough to believe in such misconceptions. The quality of neoteny lies in the delicate balance between extended childhood and its transcendence. If we want to grow up, if we want to transcend our now over-extended childhood within the new womb of the internet, we will need to engage with information technologies which encourage *mimesis* rather than deception. Digital information technologies deceive us into accepting them as real, obliterating the critical distance we require to mature. This suggests that at a time when philosophy is under threat, it is more necessary than ever before. Since Socrates, it has been the responsibility of the philosopher to question what is real, to always create some critical distance. But to continually create philosophers, perhaps it is to writing and print that we must continually turn; the conditions for our emergence. Perhaps the future of civilization will require an era of secondary literacies informed by our experience of the folly of disembodiment.

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