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ICT to Disempower? A Perspective on ICT as Postmodern Agent

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Abstract

The wholesale implementation of Information Technology (IT) has brought with it a host of unintended and unforeseen consequences. Through a literature review and an examination of both Postmodernism and IT, it is proposed that the influences of IT have acted and continued to act to promote Postmodernism. These influences amongst others include displacement of space and time, its promotion of the Information Society, its ability to create digital hyper-realities, its destructive influence on tradition and culture, and most of all its revolutionary impact on the identity. Through these influences this reflective paper seeks to demonstrate that the agency of IT (unintentionally) supports a Postmodern deconstructed societal structure.

Keywords: Postmodernity, IT, identity, culture

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Introduction

According to Bynum & Moor (in Floridi, 2002:129), computing has brought massive changes to society's understanding of the world. It is the authors' contention that through Information Technology (IT), society has finally found a form of emancipation, but in doing so effectively set itself adrift. The authors examine the interaction between Information and Communication Technology (ICT) and Postmodernism as a deconstructed social structure. The paper is a reflective study using a qualitative approach. The main research question that will be addressed is whether ICT could be regarded as an agent of Postmodernism. After discussing some necessary background issues, multiple functionalities and influences of ICT will be discussed in detail. These concepts will finally be applied to answer the central issue affirmatively.

Background considerations

In this section, a brief discussion is provided on Postmodernism and the forces that are instrumental in ICT's influences on society. To this end, Postmodernism, the pervasiveness of technology, the ethical nature of technology and lastly technological determinism will be considered briefly before examining ICT as agent of Postmodernity.

Postmodernism

Postmodernism is complex, multi-faceted and plural. Tarnas (1991:395) says 'the post-modern mind may be viewed as an open-ended, indeterminate set of attitudes that has been shaped by a great diversity of intellectual and cultural currents': (1) Postmodernism is disillusionment with society, the individual and ultimately self. Postmodernism is thus nihilistic; (2) It rejects Modernism. It disbelieves claims of primacy of the human mind, enlightenment through science and reason, and the upliftment of society through moral progress; (3) It views reality as fragmented and plural; (4) No single view represents truth, since all views are subjective; (5) Experience is characterized by *difference* and needs to be deconstructed and subjected to constant questioning; (6) Postmodernism is pop-culture, characterized by the superficiality of society and the individual being inauthentic and in a constant state of flux. The image or representation has assumed primacy over the physical. It is important to note that Postmodernism is above all else a social phenomenon and the result of the continued evolution of the Western mind.

The pervasiveness of ICT

ICT has become ubiquitous. Avgerou (1998:17) states that 'ICT is singled out as being the most pervasive technical innovation of the post World War II era'. ICT is, therefore, often used and accepted uncritically, although its ubiquity implies a huge effect on ethics and society.

The ethical nature of ICT

ICT is not neutral. Capurro (2003) states that today's society is labouring under the grave misapprehension that technologies are completely free of biases, whether social, political or economic. Condella (2001) supports this by stating 'the essence of technology is nothing technological'. Every technology alters its users' life-world because it provides them with a particular world-view and specific ways of interacting with others. Phahlamohlaka & Kroeze (2005:428) state that if the reality whereby an individual experiences the world changes, the individual's 'essence of being' is also changed. Heidegger (1977) calls this effect *Enframing*. Enframing is defined by Xuanmeng (n.d.) as 'the mode of revealing which challenges, orders and determines the standing in reserve'. Stated more simply, enframing is the means by which something is understood. It assists in the establishment of personal belief systems, what one perceives to be real, how one interprets this perceived reality and how one interprets one's experiences in this reality. It essentially establishes the frameworks and boundaries of an individual's life-world. Taking technology as an enabler of

enframing, it must be concluded that technology by its very usage, and not only its end purpose, shapes the individual and society.

Technological determinism

Technological determinism is defined by Robins & Webster (1999:73) as the idea that social progress and cultural change are driven by technological innovation and development. Technological determinism has a two-fold effect: increasing both accelerating technological advancement and accelerating societal change. The resultant effect is a society that becomes technologically dependent, which in turn pushes the course of development of the society further down the path of technological advancement, further increasing its dependence. Condella (2001) notes that 'there is a certain inevitability with regard to technological being. Once modern science set it into motion, it could not seemingly be stopped'. This idea prompts the premise that ICT could be regarded as an agent of Postmodernism.

ICT as an agent of Postmodernism

The argument of this paper is based on the conviction that ICT is both destructive and constructive, both liberating and constricting. By its very nature it changes and disrupts society. This paradoxical nature is typical of Postmodernism. Conlon (2000:111) believes that ICT provides functionalities that are core to the Postmodernism idea. These functionalities include the distribution and enablement of the global economy, the storage and dissemination of information via databases, the changing of the workplace and rise of the information worker, the speeding up and optimization of social as well as professional life, an increase in the ability to communicate and the creation of virtual worlds on the Internet.

Taking into consideration these multiple functionalities and resulting effects of ICT the following impacts are identified below: (1) Information saturation of society; (2) Primacy of representation over reality; (3) Displacement of space and time; (4) Facilitation of consumerism; (5) Displacement and rejection of cultural heritage; (6) Redefinition of traditional societal forms; (7) Potential for techno-transcendence; (8) Inadequacies of traditional value and ethics; (9) Redefinition or loss of identity. These influences penetrate each other and are not mutually exclusive. Their interdependence results in a complex and powerful set of influences impacting on the life-world of the individual.

The saturation of society with information

The most obvious impact of the mass of information being offered to society is that of plurality. One is increasingly being bombarded with potentially differing information on the same topic. This presents one with the opportunity, by considering these alternative sources of knowledge, to better consider the proposed information in the light of analysis and deconstruction. However, if one views this situation from a Postmodern perspective, this plurality raises the question of truth. What version of the knowledge does one consider to be the truth? They are all truths and at the same time none of them is a truth. Thus the hierarchical concept of knowledge is distorted and weakened (Capurro 1996). Information and knowledge is no longer seen as providing truths and reliable foundations but rather has become viewed as something to manipulate, a commodity to be traded, with relationships being geared to 'maximize the generation, manipulation, dissemination and commercialization of information' (Eischen, 2000).

The nature of the discourses whereby information is exchanged has also been altered. The thoughts of the discourse tend to be shorter and more concise, and have resulted in a change of the way that society interprets meaning. These shorter discourses tend to disguise the deeper meanings and interpretations of information. Internal reflection and contemplation of this knowledge are discouraged due to the pace and momentum of current society. This results in information never being completely understood and being only partially received. Society exists in a 'sea of signs', being saturated with more and more information that has less and less meaning (Alvarez & Kilbourn, 2002).

The spread and cross-proliferation of information and knowledge presents the individual with endless choices as well as the potential for vastly differing but equally effective solutions to problems. This influence of increased choice highlights ICT's role as an agent of empowerment and emancipation. Coyne (1998) maintains that '[t]he Internet and other computerised communications networks have the potential to free us from hierarchical structures, allow for individual expression, and expression, and enable the ultimate definition of our individual and collective humanity'. However, this effect has a flip-side. With the rapid pace and continual development of technology, in order to stay up to date, society cannot totally embrace or adopt specific solutions or practices, but has a need to stay continuously flexible. The individual's life world, therefore, becomes increasingly relative and permeable.

The saturation of society with information has the potential to create an increasingly analytical and deconstructive world-view. The human experience and even reality itself becomes data and information to be deconstructed and understood. Floridi (2002:130-131) states that '[t]he physical world undergoes a process of virtualisation and distancing in which even the most essential tools, the most dramatic experiences, or the most touching feelings, from war to love, from death to sex, can be framed within virtual mediation, and hence acquire an informational aura'. This simulated experience of reality is discussed next.

The primacy of representation over reality

ICT emphasises images and makes use of representation in most of its permutations. As society has become saturated with ICT, the use of symbols and representations of reality are playing an increasingly central role.

The concept of *representation* can be considered to be the re-presentation or simulation of reality. This primarily occurs through the use of imagery but can be achieved through text and data. De Beer (1996) states that representation simplifies a topic, thought, idea or message to a picture or word. This can help to minimize complexity and allow for quicker understanding of a concept.

Representation, through its blurring of the distinction between the representation and the actual physical object, creates what Berthon & Katsikeas (1998:151-152) call *hyperreality*. Hyperreality is defined as the phenomenon where the representation of the artefact is conceived as being better than the real thing. This is illustrated through concepts such as increasingly real simulations and comprehensive and comprehensible virtual worlds (Nunes, 1995). This can result in the real, physical world being rejected in favour of the fantasy worlds of computer gaming or the virtual environments of the Internet. Hyperrealities in this light pose a major risk to society. Berthon & Katsikeas (1998:151) warn that the saturation of society with hyperrealities can result in a loss of sense of authenticity, of what is real and what is not.

The hyperreal is not restricted to the avenues of pleasure and entertainment but also exists through the realities created by the saturation of society with data and information. A virtual reality, not of simulation, but of data, emerges from this sea of information. These virtual data realities have created a representation of the world in which space and time have ceased to matter, becoming merely additional considerations in the pursuit of effect.

The displacement of space and time

The world has become smaller with the emergence of the global village and time has assumed less of a controlling role since it is becoming increasingly relative. It is important to consider that a mutual relationship exists between distance and time - the displacement of one affects the validity of the other.

ICTs have had a major influence on breaking down the barriers caused by distance and separation, and due to this distance, on the time required to surmount these barriers. The relevance of local time

and locale is uncoupled. Rosenberg (2004:165) states that ICT has pushed place and time into roles that they cannot possibly fulfil.

When connected to the Internet physical restraints and categories of distance and location cease to matter. Spatial co-ordinates are exchanged for pseudo names and IP addresses. The replacement of the traditional social face-to-face interaction with interaction that is characterized by communication across wide reaches of space and across multiple time zones further minimizes the importance of physical location. According to Nunes (1995), in cyberspace '[t]he "Voyeur-Voyager" experiences an immediacy which dissolves space and time: a perpetually repeated hijacking of the subject from any spatial-temporal context'.

Rapid technological change also meddles with the individual's sense of time and has resulted in the individual experiencing a form of temporal acceleration. Currently a single generation can experience several successive technological changes in a short span of time (Dupuis, 1989:439). It becomes increasingly difficult for society to track the passing of time as change has become a constant influence; therefore it becomes disregarded or unnoticed.

Due to ICT's rapid development and constant state of change, society is constantly looking to the future rather than looking back and remembering the past. The recent past has assumed a role of lesser importance because of the ability to acquire instantaneous feedback. The needs for optimization, for events to happen faster and more accurately, are all drivers behind the focus on the instant and the future. The current date and time becomes less important as the future is always seen as better. One is in a state of constant expectance, of anticipation of things yet to come (Coyne, 1998). The emphasis on achieving the valorised 'win' creates a sense of incompleteness and unease, and provides the individual with a never-ending series of goals still to be achieved.

The facilitation of consumerism

ICT plays a pivotal role in the socio-economic dynamics of society. It is the authors' opinion that ICT acts as the primary enabler and motivator for consumerism and its rapid spread. Consumerism requires massive marketing efforts in order to commoditize life-worlds. The Internet serves as the new frontier for marketing products, as marketing campaigns have access to an unprecedented number of viewers.

Through the communication channels of the network society, the increasing emphasis on the representation of objects is blurring the distinction between the image and the actual physical object. According to Rifkin (2000:47), '[i]n the new network economy what is really being bought and sold are ideas and images. The physical embodiment of these ideas and images becomes increasingly secondary to the economic process. If the industrial marketplace was characterized by the exchange of things, the network economy is characterized by access to concepts, carried inside physical forms'. What one is purchasing is not the product but hyperreality. This not only assigns a false superficial value to an object, it also undermines the integrity of all physical objects. Reality itself becomes replaceable as it becomes a commodity that is bought and sold.

Through the replaceability of reality human identity has also become commoditized. According to Pullinger (1999), an individual now has the opportunity to ' "choose" different identities, both through the facilities of the Internet and by the "lifestyle choices" made possible through IT-driven consumerism'. A more fluid self has emerged, a self that is viewed as an object to be manipulated (Marx, 2004).

The impact of ICT's influence on the identity combined with the global society supplanting traditional values and culture serves to make the individual increasingly receptive to the temptations and feeling-of-belonging that consumerism offers.

In the authors' opinion, consumerism represents a potentially dangerous and destructive influence. It promotes the creation of false identities and usurps the role of culture and society, replacing them

with impermanent and superficial ideologies. Xuanmeng (n.d.) warns that '[i]n this way the human becomes "They", but in so acting loses his or her own possibility to be'. It becomes the ultimate expression of inauthenticity, and portents the complete loss of individuality and the destruction of the identity.

The displacement and rejection of cultural heritage

With the ability of ICT to break down the constraints of distance and time individuals are having their traditional life worlds challenged by new, exciting and potentially opposing outlooks. These alternative outlooks may contradict the value systems provided by their culture, throwing into doubt previously accepted knowledge and truths. According to Feigenbaum (2001), this has a massively destabilizing effect on the society and can reshape the collections of habits, outlooks, methods of communication and identities that are associated with a culture.

Globalization can provide massive economic benefits. It provides access to international markets, promotes external investment and encourages the improvement of local infrastructures. However, globalization, like most things associated with ICT, has two faces.

ICT has a massive impact on traditional forms of value and meaning. As Western society tends to be the most vocal proponent of ICT, it is generally the values of Western society that come part and parcel with ICT's implementation. Western culture brings with it democratizing forces such as freedom of expression, equal rights and individualism. In this respect ICT allows for the emancipation of communities, undermining the influence and control of subjugating or overly dominating cultures. However, ICT has the exact same influence on cultures that were constructive or benevolent. The cultural value systems are supplanted regardless of the nature of the recipient culture. The recipient culture in this way loses its specificity and becomes part of the uniform global culture. Feenberg (1996) states that as ICT affects more and more cultures, fewer will remain outside of this amalgamation to constitute a cultural difference.

The glitz and glamour of hyperrealities can also make traditional systems seem outdated and boring by comparison. Traditional norms of communication and respect are seen as pointless or inefficient. Globalization can result in the recipient culture being left without moral or ethical value foundations, resulting in the wholesale collapse of the society.

The redefinition of traditional societal forms

The pluralistic and fragmentary impacts of ICT are compounded by the strong socio-economic influences that accompany its implementation. According to Conlon (2000:115), '[t]he old structures of neighbourhood, employment, family and church no longer have the power to connect society that once they had'. Society has evolved to a state predicted by Castells (1996) where it can no longer be understood or represented without taking into consideration its technological tools.

A new type of society has emerged that is very different from traditional societal structures - the Information Society. The Information Society has become so saturated with information and Information Technologies that it has become completely dependant on them and is being shaped by them. The Information Society represents a major shift in the functioning of society. It dramatically impacts on traditional economic value models, definitions of society, social interaction and on the identity of the individual. ICT fuels industry and provides for the needs of the individual and the community. ICT becomes the cement that holds society together.

The influence of ICT has not only served to change and shape society but it has also, through these impacts, marked the rise of individualism, giving rise to new ways or paradigms of 'being' in society. Traditional views on solidarity in a society are being exchanged for the promotion of plurality and individualism. This leads Capurro (1996) to state that ICT produces a chaotic society, not of irrationality, but rather the chaos of a multitude of conflicting views. Increasingly the forces of social cohesion are questioned as the mechanisms whereby values are created are undermined (Dupuis,

1989:441). Prior to the mass bombardment of society by the mass media and the saturation of society with information, the transmission of values and meaning occurred via a macro-social process of community and education. Today these systems are no longer seen as a valid means of defining an individual's life-world - the individual would rather create his or her own definitions of meaning and value.

One of the main characteristics of an Information Society is what Introna (1995:1) calls *Instrumental Reason*. According to Introna (1995:1), 'instrumental reason's validity is found in the morally justified aims of efficiency and effectiveness'. This type of society is not only obsessed with optimization from a business point of view, but also with the optimization of their daily lives. In an information-saturated world everything can be known, and owing to the motivations of instrumental reason, everything can be improved upon. All things become objects to be manipulated in the pursuit of effect (Introna, 1995:1). This enables information flows and processes to be made more effective, efficient and cost-effective. Optimization of processes results in greater cost benefits to organizations, greater performance and reduced time-to-market. This obsessive pursuit of optimization is the primary motivating factor for automating the workplace and morally justifies the existence of and creation of human cyborgs.

The potential for techno-transcendence

A cyborg is defined as a human being that is partly or entirely machine and thus dependent on a machine for existence. If this definition is used it can be said that the reality of the cyborg is already upon us. There are many people walking around with pacemakers installed, hearing aids, prosthetic limbs, never mind the individuals whose very life is maintained only because of machines, e.g. quadriplegics and patients on life-support machines. In the paradigm of cyborgs, the post-humanistic principle of techno-transcendence can be identified, the transcending of the limitations of the current human form through technology.

The creation of cyborgs has profound ethical and moral questions attached to it. Not taking into account the extremely pertinent arguments of de-humanizing mankind to unthinking machines, the introduction of cybernetics to the human form could have profound repercussions on identity and spirituality (Phahlamohlaka & Kroeze 2005:416).

If one extends the paradigm of the cyborg out of its literal meaning and extend it to a more metaphorical context, one would be presented with a world full of cyborgs. Due to the saturation of technologies in society, individuals have become entirely dependant on machines to fulfil their existence. Consider the commonplace technologies of today: cellular technologies, televisions, microwaves, fridges and computers. All of these are seen as integral technologies that society cannot do without. All of them are empowered through Information Technologies of different complexities.

Drees (2002:602) states that language is also increasingly reflecting society's growing symbiosis with technology. For example, people are often heard to say that they are 'under stress', need to 'let off steam' or need to 'shut down'. This causes Drees (2002:602) to say that humanity increasingly refers to itself as being made in the image of machines.

Society's increased usage of the Internet has also opened up a range of possibilities for the implementation of the paradigm of the cyborg. If one considers an average user of the Internet, the user can be abstracted and considered an I/O device for this network of networks. All that the user provides are inputs that provoke some sort of processing, and following this, receive and internalize the delivered outputs. According to Dery (1996:234), this type of situation is increasingly becoming a reality as more and more people plug into the Internet and spend increasing amounts of time on-line: 'growing numbers spend their days in static observation mode, scrolling through screenfuls of data. Bit by digital bit, we are becoming alienated from our increasingly irrelevant bodies'.

The inadequacies of traditional values and ethics

ICT not only poses ethical problems itself but also, as has been shown, has a major impact on the life-worlds upon which the evaluation of these ethical questions is based. Ayers (1999) states that this problem is compounded by the fact that 'technology is advancing at a rate well beyond our human capacity to cope with the moral and ethical dilemmas associated with it'.

As a result of the freedoms that are engendered by ICT, society has greyed the areas of what can be considered to be ethical behaviour and what cannot. These concerns regarding ethics are being illustrated poignantly by the abuse of freedoms that is occurring on the Internet. Issues such as the following have arisen: What information and content can be considered unethical? Is it even possible for information to be ethical? Is it not less ethical to restrict freedoms in view of the abusive content on the Internet? What are the responsibilities of organizations and countries in relation to the Internet? Is control necessary and how much control should be used? Where does accountability lie? However, Lyon (1988:149) states that technological thought often tends to skate over the debate of ethics due to the emphasis on logic and technological advancement.

As has been illustrated in the previous sections, ICT disrupts the traditional forms of culture and community as ways of being. To a large extent moral and ethical claims are based upon these social structures. If these social structures have been altered, or a new form of society has emerged, it stands to reason that the moral and ethical codes of a society should undergo the same transformation. Stahl (2002) states that most current thought regarding ethics is based on the assumption of 'a sense of community based on reciprocal moral obligations that are largely secured through situated, embodied practices and institutions that are often overlapping and mutually inclusive'. Stahl (2002) argues that if these practices and institutions become virtualized, then a major reconsideration of the fundamental human categories needs to take place. In order for ethical and moral values to remain useful, they need to be redefined to take into consideration the information superhighways of the Internet, the potentially infinite applications and capabilities of ICT, and the new contexts of virtual existence.

The redefinition or loss of identity

These compounding and interwoven influences of ICT all ultimately have either a direct or indirect impact on the character and identity of the individual. If the principles of Post-structuralism are taken into consideration, society, ethics and culture all serve to shape the subjective life-world of the individual. Consumerism, the displacement of distance and time, and the dissent caused by fragmentation and plurality all serve to disrupt and disorientate the identity of the individual. ICT, as has been demonstrated, renders reality increasingly flexible and open to interpretation. All of these factors should be taken into consideration when considering ICT's influence on the identity. According to Pullinger (1999), '[w]e no longer live in a society shaped by a story, but in a turbulent world continuously shaped and reshaped under two main influences: ICT and the search for identity'. This search for identity is made all the more difficult as society redefines itself from a physical reality to an information-based reality. As the plurality of information has resulted in the mind becoming increasingly fragmented, the individual is now living in a reality that is characterized by constant flux.

As in most things associated with ICT, there are two opposing views regarding the influence of ICT on the identity of the individual. Marx (2004) states that through ICT, the individual now enjoys more moral and tactical freedom than ever before. However, this does not necessarily mean upliftment and emancipation; rather it means that the identity is free from totalizing concepts and free to express itself in any way it desires. An alternative view is also offered that ICT undermines the individual's identity framework resulting in the collapse of the identity rather than its strengthening. It is the authors' opinion that regardless of whether the impact on the identity is positive or negative, it can be guaranteed that a massive change in the traditional identity of the individual is inevitable.

In a traditional social community, vocations and culture all helped to provide a story for the individual to follow. Pullinger (1999) says these social structures helped to provide answers to the

questions of identity and life: '[w]hat is the meaning of my life? [w]here am I going? [w]hat choices are available to me?' As the market place and organizations become increasingly flexible, jobs disappear or are transformed, traditional social interaction and communities become obsolete, identities which were previously derived from these are left without a coherent foundation. Through the tools, software and networks of ICT the uniqueness or individualism of the identity is promoted. The individual can no longer merely accept the meta-narratives passed onto them by society and culture. The ambiguities created by ICT and the undermining of truth have encouraged the individual to seek their own worlds of understanding. The individual is given the means for freedom of expression, is encouraged to explore and discover the world, encounter different life-styles, meet new people and be challenged by different paradigms of thought. The Internet provides the individual with a world of information that could potentially contradict that which they had previously accepted as truth. It can also provide a window into a philosophy or culture that they find more acceptable, that more closely aligns with their personal values and sense of meaning. This is not to say that ICT will always cause dissent. It could be the very mechanisms provide knowledge and insights that reinforce currently accepted value systems. However, through ICT the 'blinkers' have been removed, the individual can now make that choice for him or herself.

According to Suler (2002), '[a] single person's identity embodies multiplicity. Through the tools and mechanisms of ICT the personality can be deconstructed and the individual is able to take on different personae and explore the different facets of their personality as desired. This type of identity switching has become increasingly prevalent in the virtual communities of the Internet. Rosenberg (2004:624) states that the virtual worlds of Internet seem to be predominantly populated by individuals intent on self-discovery and understanding.

Due to the nature of the Internet and the detachment of the individual from his or her physical environment, it is possible to present an image of oneself in exactly the manner you desire. This enables the individual to become anything and anyone they want to be, or only to reveal of them that which suits their current needs (Rosenberg, 2004:590). However, Slouka (1995) warns that due to the ease with which ICT can render the exploration of multiplicity possible, this can result in these multiple selves springing up everywhere. This excessive multiplicity could put the true identity of the individual under extreme pressure resulting in a 'springtime for schizophrenia'.

Findings

Taking into account the multiple functionalities and influences of ICT identified above, one could now try to answer the basic research question, i.e. do the societal influences of ICT act as agent for the deconstruction envisaged by a Postmodern view?

The pluralism caused by ICT and the need for constant change can be seen as fuelling the Postmodernistic doubt of meta-narratives and the encouragement of fragmentation. By casting doubt upon knowledge, the individual's perception and experience of reality is blurred. ICT can thus also be seen as promoting the Post-structuralist theory of an indeterminate universe as well the Post-humanist rejection of knowledge as a meta-narrative of truth.

The pluralistic and fragmentary impacts of ICT are compounded by the strong socio-economic influences that accompany its implementation. These forces, combined with the rise of individualism, have resulted in the destabilization and ultimate rejection of traditional concepts of value, culture and society. These social structures offer meta-narratives that are no longer seen as offering viable truths and frameworks for understanding the human experience. Owing to the capabilities of ICT, the identity can be increasingly self-orientated and no longer has any place in its life-world for the constraints of cultural forms and community.

With society increasingly disregarding social structures as no longer appropriate or useful, traditional moral value models are also being seen as increasingly irrelevant. The many different implementations of ICT have raised ethical and moral dilemmas that the current ethical and moral standards cannot answer. This stance on the inadequacy of current ethics and morals can be seen as

nihilistic as well as evidence of a rejection of the meta-narratives that are proposed by these value systems.

ICT has made the individual increasingly vulnerable to the offerings and hyperrealities of consumerism. Consumerism is a strong symptom of Postmodernism in its encouragement of inauthenticity and superficiality. Through its enablement of consumerism ICT can be seen as promoting Postmodernism. ICT both supports and promotes Postmodernism's use of simulacra, through which the image and concept gains primacy over reality itself. This encouragement of the use of simulacra is another major factor in the rise of consumerism.

Communication across the globe has resulted in the primary constraints of time and locale becoming less important. The use of ICT has resulted in impairment of the individual's sense of time due to temporal acceleration and an indeterminacy regarding the present. This resulted in reality becoming increasingly permeable and subjective, supporting the Postmodernist concept of displaced time and space.

In ICT the human form is also seen as prone to improvement. The metaphorical cyborg already exists in society. The possibility of the literal cyborg is increasingly becoming a reality through the sciences that are being empowered by ICT. The realisation of the cyborg can be seen as the Post-humanistic desire to transcend the limitations of the human form.

ICT, as has been demonstrated, renders reality increasingly flexible and open to interpretation. This encourages plurality, fragmentation, dissent and a general rejection of the meta-narratives offered by societal structures. This results in the life-world and reality of the individual being seriously destabilised. Through ICT, the identity can be further disorientated by the virtuality and multiplicity implicit in its use. Individuals are becoming increasingly detached from reality as information saturates their existence, with everything being manipulable in the pursuit of effect, even the identity itself. ICT has the potential to render the personality so flexible and thin that it can be considered negligible.

Taking all of this into consideration, it can be said that Post-humanism, Post-structuralism and Nihilism are all influences that ICT has brought to bear on society. Bearing these conclusions in mind, and considering the impact on the identity of the individual which, in the authors' opinion, is the ultimate symptom of Postmodernism, it can thus be said that ICT acts as an agent of Postmodernism.

Conclusions

ICT is by no means a neutral technology and brings with its use destructive and constructive forces, as well as liberating and constricting ones. By its very nature ICT is serving to change and disrupt society.

In a Postmodernist fashion ICT offers contradictory and paradoxical positions. ICT can be both a liberator and tyrant, both constructive and destructive. While Postmodernist thought has been obvious for over a century, Postmodernism has found its ultimate expression in the ICT-saturated world of today. It is only through ICT, it has been demonstrated, that the means for these and many other facets of Postmodernism can be so totally realized.

Throughout this paper one has been presented with society's fragmentation, its loss of reality, its superficiality, its disillusionment and its disbelief in meta-narratives. However, one is also presented with a view of complete emancipation, self-expression and the struggle for authenticity. If one combines the visions of the future of ICT and Postmodernism, predictions can range from technological utopias to dehumanized cyborgs, society's rebirth or apocalyptic visions of its inevitable degeneration and collapse.

Dupuis (1989) assumes a humanistic stance, stating that '[n]o matter how powerful technology becomes or how infinite seem to be the possibilities it allows us to glimpse, the future of society remains in the hands of humankind'. Yet, from a Postmodernist view humanity no longer assumes a controlling role. The predictions of technological determinism are increasingly obvious in the technology-saturated world. However, to aver that humanity's future is linked to its technological destiny is a doubtful proposition, setting up a meta-narrative vulnerable to critical analysis and deconstruction.

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