

## **E-nchantment - Wiederverzauberung in Contemporary Computer Games**

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### **Abstract**

*The use of technology has contributed to what Max Weber termed the “disenchantment of the world”. Curiously, however, we see that certain computer applications – primarily computer games – are now used to re-enchant the world by once again allowing magic, moral and narrative into what was constructed to be a rational reality. This project – the re-construction of the enchanted world – is an interesting social phenomenon and likewise an important social trend. We describe some of the elements in both dis- and re-enchantment, and provide a small case study of the game Asheron’s Call to support the hypothesis that we are in today’s computer games indeed witnessing a counter-reaction against the rational world-view.*

### **Introduction**

Max Weber has characterised the development of the modern as a multi-faceted process that moves in the direction of the rational. He has pointed out that an

important factor in this process is the disenchantment of the world – the gradual dismantling of magic, religious, and supernatural beliefs.<sup>1</sup>

It has been argued that those who find that existential meaning has been thrown out together with the ghouls and demons of old might resist this process. In the view of these people the process of disenchantment is often rendered as a process that voids the world of meaning.<sup>2</sup>

If this is the case, that there is a resistance against the rationalisation of society, this suggests that there is room for a counterrevolution, an attempt at re-enchantment or *Wiederverzauberung*. This raises a number of interesting questions, the answers of which could help us understand the evolution of the Internet and new technologies. What would this counterrevolution look like, and where can we find examples of it in contemporary society? What would it strive to accomplish?

To answer this question we need to examine what the elements of re-enchantment might be and how they might take form in the post-modern world. Information technology seemingly maintains the general tendency toward mechanisation and depersonalisation in modern society. Technology is by many believed to assist in what we would, with Weber, term the disenchantment of the world.

If we examine the issue closer we find that there is room for nuances. Certainly, there are technologies that automate rather than anything else, and these technologies could not reasonably be candidates for our re-enchantment of the world. Rather they are taking part in the automation of production and distribution and as such contribute to a more rational society. However, there are better candidates. The first, almost obvious, choice would be what is sometimes called entertainment technology.<sup>3</sup> Television, radio, video, film, and modern interactive entertainment all engage the user in social behaviour that enables the user to construct world-views and ‘escape from reality’. Where to, we then would like to ask, do users flee? That, of course, varies, but there are entertainment technologies which open up worlds that lend themselves to examination for signs of re-enchantment, and the most obvious of these technologies are the increasingly advanced and interesting computer games.

The disposition of this paper is governed by this search of evidence for a re-enchantment counterrevolution. To start this work at all we need to have some criteria of what an enchanted world would look like, and what we thus would be looking for. We then concentrate on examining the small but promising set of phenomena in the ever-evolving world of computer games – the on-line role playing games – and how these interrelate with the notion of re-enchantment. It should be stressed here that this line of research requires many tentative definitions and operative criteria, and that these are not necessarily fixed in marble. Rather, the

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<sup>1</sup> Weber, 1922 (1915-19): 513, 525, 564; Weber, 1972 (1920): 308

<sup>2</sup> Liedman, 1999 suggests this in an analysis of modernisation, for example

<sup>3</sup> For us this term stands for technologies that support various social forms of entertainment.

investigation of the phenomena we encounter will help us construct a better understanding of the worlds we examine.

## **Disenchantment and Modernity – Factors**

The first question that we face is naturally that of trying to separate the disenchanted world of today with the enchanted world that Weber claims we have left behind. It is crucial to try to find a set of different signs for each state. Here it could be argued that this, in itself, is an impossible task. Why do we believe that we can lift ourselves out of the world we live in and clearly characterise the enchanted state that Weber claims is lost to us? Might we not be hindered by the very phenomenon we are investigating? Can, in short, disenchanted researchers recognise the factors of the enchanted world? And what would our method be for determining what the enchanted world was? What factors would we choose?

When trying to discern the elements of re-enchantment it is important to contrast the process of re-enchantment with that of disenchantment. Starting from the theories of Weber, we find a distinct vision of disenchantment: man separated himself from his world and made it a separate object by means of a rational method of reductionism. Man constructed a rational picture of the world. All of a sudden it seemed transparent to the human gaze. Animistic or magical views of the world have particularly in the Occident given way to a world-view inspired by science. Rationalism and accumulation of ever more precise kinds of knowledge gave rise to a new view of life and reality. Scientific analysis and industrialist use of nature demystified the world.<sup>4</sup> Aiming at making the world workable, man has made use of technology that creates distance and puts man at disposal.<sup>5</sup> We opened up an affective distance between ourselves and nature. Social engineers with a forward-looking belief in progress tried to form a new man with his relations to the past cut off. This helped technology to triumph over traditions and roots. The natural law of value, that defined mass-produced objects as counterfeit copies of original objects, and therefore not worthy of production and consumption, was important to the ancient and medieval world. Mass production was alien to the Medieval society, but replaced unique originals as industrial production took off. This induced an enormous growth of a capitalist market. As most objects in man's environment thus lost their aura, man was left living in a demystified reality.<sup>6</sup>

The religious dimension has gradually been crowded out from the Western mind by a new force that has filled constant human needs of a meaningful existence. Science acquired cultural significance and power similar to what religion used to possess.

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<sup>4</sup> Weber, 1922 (1915-19): 564; Weber, 1972 (1920): 308; Macfarlane, 1987: 77-80, 96

<sup>5</sup> This is a defining quality of technology according to for example Heidegger, in *The question concerning technology*.

<sup>6</sup> Benjamin, 1936: 12-19; Ödman, 1995: 62

Science took the place of religion in Western mentality and emptied the world of meaning. Secularisation has cleared most sectors of Western society of their former value-base of religious content. After a period even technology itself lost the mystical and cultic qualities it had during early Industrialisation.<sup>7</sup> Life in the Western world in particular has been demystified. Michel Foucault has given the history of sexuality as an example. In many cultures outside the Western world, the mystique surrounding sexuality has been deliberately preserved, in order to keep its worth. In Western civilisation, a science instead of an art of sexuality was established.<sup>8</sup> Nothing is regarded as holy or secret in a modern society that has went through centuries of Enlightenment.<sup>9</sup> Typical of modern man is not to experience any discovery, surprise, or sense of mystery.

Modernist ideology is, in this conceptual framework, viewed as a form of hubris. Scientific and technical progress makes mankind believe itself in mastery of nature and society. Meaning depends on the experience of coherence and belonging. Modernity has instead meant reductionism and the separation of different life-spheres, and most prominently the separation of man from nature. By de-coupling the intimate sphere from working-life, industrialism was successful. Human impulses are dampened and controlled in clear numbers.

The tendency to abstraction is countered by the need for people to experience meaning. In re-enchanting computer games, individuals are able to create a parallel mode of existence, an illusion of meaning, that becomes increasingly real, and enchantment within or beside a disenchanted world. In a disenchanted reality the most logical site for enchantment is the virtual.

But what is this re-enchantment? We will now turn to the elements of re-enchantment and discuss them before we delve into a short case study.

## **The Elements of Reenchantment**

Post-modernism has discredited the Marxist and liberal ideas that history is the story of progress and the realisation of human freedom. Post-modernity is characterised by a plurality of ways of viewing and valuing the world that cannot be subsumed under some common formula. The post-modern attitude is to stay fragmented and possess very individual systems of beliefs.<sup>10</sup>

To merely look for the opposite of signs of disenchantment might be less than useful. The reenchantment is a return to the enchanted state of before, and as such not a negative. It might therefore be more fruitful to ask what the principal elements of the enchanted original state might have been. We have identified four aspects

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<sup>7</sup> Anderson, 1998: 87.

<sup>8</sup> Foucault, 1978 (1976): 90-91.

<sup>9</sup> Liedman, 1997: 455-462.

<sup>10</sup> Bauman, 1993: 14-36

that we think might sum up the enchanted state in an instrumentally useful way. The aspects are:

- Medievalism
- Magic
- Morality
- Narrative

This set of factors is, in a sense, arbitrary. We examined the texts of Weber for candidates to what we would consider as suitable signs for the enchanted state and then made a list, trying to find the most suitable factors and variables. We then tried to condense the factors into subheadings and finally into four simple keywords that we could use as operative tools in our examination of computer games. These keywords were also chosen in respect to trends observed in computer games. Is this then not dangerous? To choose terms that already apply to some computer games in trying to lead into evidence that computer games today exhibit signs of re-enchantment? We do not think so. All four terms were defined and revised and we were careful to see that they did indeed have their roots in the writings on disenchantment and modernisation. This way we have only tried to create a terminology that will be able to handle both language games in a suitable fashion. Of course, someone might like to argue that this is a case of *presuppositio*, but such an argument would, we believe, be wrong since the set of keywords demonstrably is rooted in the textual tradition on modernisation.

There is another methodological clue that deserves mentioning. The search for the enchanted state is in many ways a romantic project. In literary theory romanticism has often been characterised as a movement that idolises a world which comes close to the Weberian enchanted world. In fact, the likeness of the romantic literary tradition and its ideals and Weber's enchanted state are so pronounced that we might very well use the criteria used to describe romanticism as a literary movement to describe the enchanted world.

These different factors are discussed below in sub-sections.

### **Medievalism**

Modernity has given rise to longing for a mythical golden age of a hardly ever experienced, neither exploited nor explored nature. Individuals harbour a dream that is not possible to realise in any other context than in a virtual one. Nostalgia is emblematic of our moment in history with its surplus of rationality when the landscape has been abstracted, and the immigration to sub-urban ghettos has passed its zenith.<sup>11</sup>

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<sup>11</sup> Johannison, 2001

The Medievalism we have studied within what is sometimes called “Techno-romanticism” shares many traits with the old Romanticism.<sup>12</sup> The old romantics regarded the Enlightenment and industrialisation as denying man religion and idealism, replacing them with feeble atheism and materialism. Although having passed through disenchantment, in a Platonic sense we remember that lost Eden.<sup>13</sup> Romantic authors and philosophers realised that the ancient synthesis of the spiritual and the sensual world was lost by means of the cult of reason against superstition. The Middle Ages preceding this fall became an object of worship. A nostalgic feeling for a past golden age characterises classic Romanticism as well as Techno-Romanticism.

To dream of something exceptional is common in post-industrial society, with the increased knowledge of past times and distant parts of the earth universe it has given man. The sociologist Roland Robertson has claimed that globalisation means both “/.../the compression of the world and the intensification of consciousness of the world as a whole.”<sup>14</sup> Many feel an urge for living genuinely; and escape the situation they inhabit. Computer games with mythical ingredients can be a haven for this quest.

The enchanted world contains many of the factors of medieval society. The rational is subjected to the religious and religious faith is not only possible, but also often the primary way of understanding the world. The world has not been explained or even declared to be explainable.

Medievalism is an important factor in examining the world of computer games for signs of a tendency to re-enchantment since we find that there has been a tendency, in both classical romanticism, with it’s tales of knights, monsters and crusades and techno-romanticism to idealise this age.

### ***Magic***

Magic is a crucial part of enchantment and of the mind set of romantics, old and techno-style, and in many ways it is the opposite of science. It is the prime factor in the enchanted state, and allows things that cannot be explained. Magic is closely related to narrative – the third factor – in that they combine to create a world with reversed causality: a world where what happens is the cause of what has happened.

Magic is also an intrinsic part of the above mentioned medievalism that has been observed in the design of virtual worlds.<sup>15</sup> These worlds are constructed with mythical times in mind. Many of the original Multi User Dungeons have been designed around medieval themes (dragons, princesses, magic cauldrons, wizards) and the computer world at large has been affected by this bias. (Consider the fact

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<sup>12</sup> Coyne 2001, *ibid.*

<sup>13</sup> Berman, 1981: 172

<sup>14</sup> Robertson, 1992: 8.

<sup>15</sup> See Coyne, *ibid.*

that people well versed in programming and design, often are referred to as wizards!)

Magic is more than this. In a bakhtinian way magic reverses power structures and puts power into the hands of anyone who can master its secrets. The process of mastering magic is often lonely and void of social interaction and the quest is always for knowledge, rather than the more mundane gold of the fairy tales of old. This ideology closely resembles the basic ideological traits in computer sub cultures such as hackers and crackers subscribe to.

The utmost consequence of magic is that there is more to the world than science, and that there is a religious or at least meaningful sign infrastructure to carry the power of magic. This implies that there is always the possibility of transcendence. In the last round this transcendence is what the disenchantment has taken away. "This is all there is" says the rationalist and points to the world. Romanticists and adherents of the enchanted world do not accept this idea.

### **Morality**

Another important factor in enchantment is morality. The centuries from the Enlightenment onwards was a period of heightened scepticism and critique against metaphysics, and consequently against morality, that culminated during the Cold War. Morality is not easily verified or quantified, and was thus spelled out as unscientific in the positivism of the 19<sup>th</sup> and 20<sup>th</sup> century. An anti-metaphysical *Zeitgeist* of emotivism and nihilism cast out ethics as a prejudice.<sup>16</sup> This world – forever lost to ethical relativists – might be efficiently recreated in a gaming environment. Users of re-enchanted computer games to only a small extent obey patterns of morality in society as a whole, but construct a morality specific to this sub-culture. We mean a revival of categories of moral value, not a restoration of any particular behavioural patterns. The morality of computer games is pronounced and easy to follow.

Magic – an important factor in itself – is always divided into white magic and black magic, much as the programmers in computer subcultures are divided into hackers and crackers. The moral undertones of the enchanted state are clear: there is good and evil, right and wrong, white and black in the enchanted state.

It might be argued here that morality is too wide a term to be used efficiently. Is not all behaviour in a sense moral behaviour? The standards differ, of course, but behaviour is of course always moral in one way or another. Perhaps the term "moralistic" would more efficiently illustrate what we would like to point to here.

The morality we speak of here is closer to moralistic in the sense that it defines clear moral categories. This is what we mean when we use the term morality.

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<sup>16</sup> Sen, 1987, 7-8.

Morality to us is the existence of fewer grey categories, and more polarised ethical views.

There are games here that make morality the very essence of gaming, such as the popular god-games: *Populous*, *Black & White* et cetera. These are interesting in that the very idea that it is possible to design a game around the theme of being a god seems to presuppose that moral behaviours and issues can be codified in such a way as to construct an iterative playable moral dilemma.

The romanticists work with the same notion of good and evil, black and white. The abundance of the gothic themes in the romantic movement is one aspect of this fascination with morality.

This, in turn, is a consequence of the fact that there is a narrative in the enchanted state. The narrative orders actions in clear moral categories, makes magic possible and is suited to the medieval world's make-up. Thus it is possible to suggest that narrative is the most important factor in the enchanted world.

### ***Narrative***

The structure of the enchanted world is conducive to meaning, it is open to a narrative, as opposed to the random structure of the modern world that is more of a collage, closed to narratives. The narrative of the enchanted world is the very presupposition for meaningfulness.

Narrative is also what is first destroyed in the disenchantment. The terrible suspicion that the world might be the sum of random movements of molecules that enters the modern mind is alien to the enchanted mind. The enchanted mind is structured around the concept of meaning – be it in the simple folk theorem of “nothing happens for no reason” or in the more advanced forms of theological predestination of Augustine. The tendency is the same. Romanticism works with the same notion of a deeply meaningful world where everything is readable, in a sense.

The enchanted world allows for meaning where the disenchanted world sees only cause and effect. Meaning and narrative arranges the enchanted world in to patterns of intrigue and progression. The use of moral concepts and the practice of magic arise out of this ordering of matters in interpreted patterns of progression, and intrigue.

It is however important to note that not all narrativity today is top-down. The makers of games often supply a set of narratives – myths – about the game world being offered. The space for self-made narratives is however generous. This might seem to contradict our claim that narrative is a part of the enchantment. If the individuals can produce narrative, why aren't individuals yearning for meaning producing it today, off-line? The difference between game worlds and the real world here is not necessarily in the existence of the narratives. It is true that we can – and do – create narratives in the disenchanted world, but the narrative never connects with the world-as-such. The narrative remains an illusion in the

disenchanted world whereas it can connect with the enchanted world in a wholly different way. The effect of a narrative on an enchanted world is momentous – it changes the world! It makes a difference. While we create narratives out of necessity in the disenchanted world – since this seems to be a basic human need<sup>17</sup> – the narratives affect and form the enchanted world. Legends are born, mysteries unveil and heroes are created from the narratives produced by the gamers.

The difference is one of amplification. The enchanted world amplifies the narrative and makes it an important part of the pattern of progression, whilst the disenchanted world subdues narrative and only lets vulgar and loud narratives emanate.

### **Summary and Further Thoughts**

In this section we have tried to show what the elements of a re-enchantment could be. We have also tried to introduce these elements and show how they interrelate.

Another tendency of re-enchantment is the spiritual movement often called “new age”. This developing form of spirituality is characterised by a search for a lost whole, lost wisdom and sense of belonging to universe.<sup>18</sup> In a sense there is a deep structural likeness between new age and games: both imbue the world with meaning, and narrative.

Sports such as wrestling and boxing have by means of rationalisation with fixed times of contest and rules been demystified.<sup>19</sup> The contests of professional wrestling practised in the U.S. are farce-like spectacles. These give a remembrance of the older time of sports, when the outcome could be lethal to the competitors.<sup>20</sup> This lends re-enchantment to the disenchanted sporting world. Exactly as with computer games these sporting events contain elements of graphic violence and ritual fights. And the popularity of wrestling games indicates that the phenomena cohabit easily.

The notion of re-enchantment hinges on the definition of the original enchanted state from which we have descended. We are aware that the original enchanted state can be described in a multitude of ways, but some of the more important factors in the design of the enchanted state are: magic, morality and narrative. These factors combine to create a world that is governed by teleological concerns and narrative structures, rather than by scientific randomness and meaninglessness.

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<sup>17</sup> Postman 1999:101-105

<sup>18</sup> Hammer, 1998

<sup>19</sup> Elias, 1978 (1939): 280.

<sup>20</sup> Elias, 1978 (1939): 281; Elias, 1998: 169-172.

## The Development of Gaming

To understand why gaming is an interesting field to examine for signs of re-enchantment, we must first sketch – briefly – the evolution of gaming as a phenomenon. In this section some basic points are made and the notion of On-line Role Playing Games is presented.

### **Single-, Multi- and Society Player**

De-socializing forces are part of many current transitions. Telephones and computer algorithms substitute for personal contact between human actors.<sup>21</sup> The evolution of gaming has moved from the solitary player interacting with the machine (single player) over the cluster of people interacting in cyberspace to the evolution of social structures in persistent 3D worlds (society player). The old fear that gaming was an antisocial behaviour can now often be laid to rest. Gaming represents an alternative mode of social behaviour that might in part be more attractive than that of the real world – especially for young people, who want to be able to control the social interactions the partake in.

The evolution of multiplayer games is not all that recent. MUDs and MOOs are old phenomena.<sup>22</sup> The evolution of persistent 3D worlds is the last and perhaps most important step in the development of alternative worlds. The dreams of science fiction writers such as Gibson about the creation of a consensual hallucination have now come true in these games.<sup>23</sup> While they still lack much in user interface design (immersion in the true sense of the word is not yet possible) they have now become so attractive that hundreds of thousands regularly play these games.<sup>24</sup>

### **Online Role Play Games**

The games most interesting to our field examination are the so-called on-line role playing games. They are *in essentia* nothing else than alternative worlds. They contrast sharply with simpler multi-player games like Quake III where only skills of shooting and killing are premiered.

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<sup>21</sup> Turkle, 1997 (1995)

<sup>22</sup> There are different definitions here, but the one from Webopedia (<http://www.webopedia.com>) fits nicely: “Short for Multi-User Dungeon (or Multi-User Dimension) a cyberspace where users can take on an identity in the form of an avatar and interact with one another. Originally, MUDs tended to be adventure games played within enormous old castles with hidden rooms, trap-doors, exotic beasts, and magical items. Nowadays, the term is used more generically to refer to any cyberspace. MUDs are also known as 3-D worlds and chat worlds.”

<sup>23</sup> Gibson, 1995

<sup>24</sup> EverQuest reportedly has more than 205 000 players that subscribe to the world provided by the game’s publishers.

ORP-games offer the user an alternative world, constructed to fit his or her needs. The games in this genre often seem to have medieval themes, but futuristic ones are also available.<sup>25</sup>

These games offer new social contacts, a world filled with wonders and – we think – a return to the enchantment. These worlds are truly moral and filled with narrative magic.

## **Analysis of Asherons Call**

To give an example, and a first sketch of a mini case study, of a game world that exhibits clear and present signs of re-enchantment we have chosen *Asherons Call*, since this game is widely spread and well known.<sup>26</sup> We will attempt to show in our analysis that several features in this game are features that indicate that the game offers a rudimentary reenchantment for its players.

### ***Magic***

The world in Asheron's Call allows for magic in several different ways. Characters can choose to become magicians and learn spells that they can use to change their environment.

Creatures and monsters also imply the existence of magic.

Most On-line Role Playing Games contain supernatural beings; gods, monsters, trolls and what not. This is a palpable sign that we are witnessing a re-enchantment. The trolls, driven out by rational science, now live and thrive within the very icon of that rationality: the computer.

### ***Morality***

The morality (or moralistic aspect) in Asheron's Call is of two basic types: one is immanent in the construction of the game and one player generated.

The designed morality is quite strict. It is – to take the most obvious example – not allowed to kill other players if these players have not chosen to be mortal (and thus also able to kill other mortals). Such players are often confined to – or prefer – separate "PlayerKiller worlds".

This designed morality also allows for positive constructs. It is possible to swear loyalty to other players, and in return gain items of worth, training and money. The price of loyalty is a number of experience points that are skimmed of the players own and passed on to one's lord or lady.

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<sup>25</sup> Anarchy Online, an ORPG, is an example of a futuristic online world.

<sup>26</sup> It is published by Microsoft Inc. See <http://www.microsoft.com/games/zone/asheronscall/>

What is interesting is that many players take this system further and actually develop and play in clans, with their own moral codes and conduct. These clans evolve with time and it is an interesting task to follow their evolution to learn more about social interaction in these worlds.

The immanent and constructed morals evolve over time. Behavioral patterns that are detrimental to the game at a macro level might be eradicated by the game designers (via what equals an act of God), and other lesser transgressions might be handled by joint player actions.

An example of the latter is found in 3D Shootemups like Quake III, where staying in a particularly beneficial place is swiftly punished by other players. The behavior – it is usually called “camping” – can also be stopped by the game designer, by killing anyone that stands still for more than a given time.

### **Narrative**

The narrative of Asheron’s call is quite complex, at least from an ontological point of view. The introductory story of how the great magician Asheron allowed all his allies to flee to alternative worlds when danger threatened the land, only to allow them to return much later when the land was once again safe, presupposes that the game world is the real world, and that we, as players, have been exiled to another world.

It also offers a tempting interpretation: the game world is the lost enchanted world that we – plunged into exile in the disenchanting world by modernity and industrial evolution – can now return to. This interpretation is really not absurd, and the interpretation of the world as an enchanted world is indeed not far-fetched.

Computer games can in many aspects be regarded as works of art. Modern art is not narrative, but reacted against Classic art and its historicist motifs and narrative themes, whereas Post-modern art such as Odd Nerdrum is highly narrative.<sup>27</sup> The abstract experiments of Modernist literature do not seem as promising or attractive any longer. Instead narratives have once again found their way into high-brow literature. Post-modern thought such as Bruno Latour claim that a good narrative is necessary for a scientific result to become regarded as a fact.<sup>28</sup>

Asheron’s Call is an example of using a narrative framework to create a game that allows the user some elements of a re-enchantment, and thus gives him or her (though it is often a him), an opportunity to live a contextually meaningful e-life.

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<sup>27</sup> Nerdrum and Pettersson, 1998

<sup>28</sup> Latour, 1984; Latour, 1999: 122-123.

## **Some Conclusions and the Need and Forms for Further Research**

The violence of modernity – the forceful reduction of magic, moral and narrative to rationality and lack of meaning and disenchantment disenchantment – has forced a counterreaction.<sup>29</sup>

This reaction is evident in many different fields, but none of these fields is as obvious and interesting as that of computer game worlds. These alternative worlds offer the daunting project of reconstructing the enchanted world – rebuilding Eden. Even if games today are simple and lack the complexity of real life, and even if we still have found no good ways of erasing the feeling of fiction when partaking in these worlds, they still constitute a first step towards rebuilding a world governed by narrative, allowing for magic and requiring deep moral infrastructures.

Every reaction produces, sometimes unwillingly, a new cultural utterance. Due to its distance in time, the reaction is helplessly separated from the object or tendency it aims at restoring. The nature of the medium colours the character of this utterance. The meaning of enchantment is changed as computers mediate action. While it is not possible to re-enter the enchanted state, it is possible to create an *e-nchanted* state. Re-enchantment is not purely a restoration but a creative effort. This is in essence a construct, but the ontological difference between this construct and the original state of enchantment; that is: the difference between enchantment and e-nchantment, slowly wanes away under the on-slaught of new technologies and inventions.

The study of on-line computer worlds is not new, but it can be developed.<sup>30</sup> It is our belief that studies of this kind will map the mind-set of the next generation, where computer generated worlds might very well reflect the wishes and attitudes of a growing generation. When you sell worlds you have to be able to manufacture them so carefully that they match the desires of your customers. The findings from studies like these will be important pointers to the future development of the information society.

Another interesting hypothesis that occurred to us during our work with this paper was that there might come a time when the difference between the ‘real’ disenchanted world and the e-nchanted world is – from a user interface point of view – negligible. We term this stage in the evolution of alternate worlds “the limbo limit”. When we reach this limit (a limit that is not to far off) we could connect to alternate worlds and have our memories redesigned, so that we never knew of the disenchanted world. True re-enchantment – return to E-den in some sense – might then be possible. Only the ontologically orthodox would then stay in a disenchanted world, with the always-present lack of meaning, value, magic, morality and

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<sup>29</sup> Bauman, 1993: 33-36

<sup>30</sup> Turkle (1995)

narrative. A culture that reaches the limbo limit can effectively reverse the disenchantment process by the creation of alternative worlds. In such a culture 'reality' becomes an aesthetic choice.

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