Mindless repetition: Learning from computer games

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This paper examines what an understanding of some of the key characteristics of computer games can contribute to design. Drawing on insights from Freud, hermeneutical theorists, and games themselves, we focus on repetition, its variation, and the matter of the ethical in computer games. The essay is concerned less with resolving the ethical questions posed than showing that the ethical also succumbs to the rule of play. Play is at work in design, the computer game and the realm of the ethical.
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There is little difficulty in associating the serious, work-oriented activity of designing something (a building, product, structure or computer program) with play. Designers are generally pleased to ascribe a frivolous, play aspect to their work. They see the design process as a series of successive rehearsals and revisions, through drawings, models and computer simulations, leading to a manufactured product. Under the play metaphor, design involves coming to a design situation, always with some expectation of what the object will be, and engaging in a to-and-fro dialogical game. In the process the designer's expectations for the design undergo revision and transformation. At its most typical the process is absorbing and engaging, with objects appearing into and receding from view. The game implicates materials, tools, the social context of the designer's studio, the brief, the clients, regulatory authorities, and a corpus of precedents, a whole contextual field. The elements are in play. Design so described as play has been explored by theorists such as Schön[1], and Ehn[2], and examined in the context of hermeneutics by Snodgrass and Coyne[3].

It is against this background that we are in a position to examine computer games, and what they might contribute to an understanding of design. Educators often structure student learning assignments around the concept of

1 Schön, D *The Reflective Practitioner* Ashgate Arena, Brookfield, VT (1983)
2 Ehn, P *Work-Oriented Design of Computer Artifacts* Arbetslivscentrum, Stockholm, Sweden (1988)
3 Snodgrass, A B and Coyne, R D 'Is designing hermeneutical?' *Architectural Theory Review* Vol 2 No 1 (1997) 65–97

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the game, including specialised computer games for learning about architectural form[4]. There is a tradition of thinking about and learning from the game in relation to computers and design, and the influence of Von Neuman[5] and game theory in the field of computation in general, and artificial intelligence (AI) in particular, is legendary. Here I wish to explore what a phenomenological, linguistic orientation to the game contributes to our understanding. Here the emphasis is less on symbols, algorithms and methods, than on the way the game and play feature in language.

1 Repetition

Computer games bring into relief the issue of repetition. According to Marx, labour in the industrialised age succumbs to the dictates of the machine. The successive division of labour reduces work to the repetition of ever more menial tasks. Following Marx, Stallabras[6] implicates computer games in the tyranny of repetition, inducing consumers to emulate the qualities of the machine, such that in Space Invaders there is an endless flow of creatures, as though from a production line. But repetition is a key aspect of play in any case. According to Huizinga[7]:

In this faculty of repetition lies one of the most essential qualities of play. It holds good not only of play as a whole but also of its inner structure. In nearly all the higher forms of play the elements of repetition and alternation (as in the *refrain*), are like the warp and woof of a fabric (p. 10).

For Gadamer[8]:

the movement which is play has no goal which brings it to an end; rather it renews itself in constant repetition (p. 93).

One of the obvious characteristics of computerised arcade games is their reliance on fast responses to a rapid succession of intimidating challenges, as in having to aim and shoot at an invasion of moving targets (as in the *Space Invaders* game)[9]. The more abstract challenge of positioning randomly descending shapes so that they form interlocking patterns, as in *Tetris*, also has this characteristic. Action games, such as *Doom* and *Quake*, provide the illusion of racing around in circles in interconnected spaces, collecting ammunition and energy charges while shooting and being shot at. But then the gentler genres of tactical and adventure games also have this repetitive aspect. Spaces are repeatedly visited and revisited. In *Myst III* the game player finds herself in repeated examination of spaces and objects in order to solve a puzzle or find a way out of some world or other. The puzzles themselves often require the testing of permutations. The solution may involve the discovery of a procedure that requires the repetition of certain operations. So in the introductory environment of *Myst III* (a

4 **Radford, A** *Games and Learning about Form in Architecture* Working Paper Department of Architecture, University of Adelaide, Australia (2001).
5 **Von Neumann, J and Morgenstern, O** *Theory of Games and Economic Behaviour* Princeton University Press, Princeton, NJ (1947)
6 **Stallabras, J** 'Just gaming: allegory and economy in computer games' *New Left Review* Vol 198 No March/April (1993) 83–106
7 **Huizinga, J** *Homo Ludens: A Study of the Play Element in Culture* Beacon Press, Boston, MA (1955)
8 **Gadamer, H G** *Truth and Method* Sheed Ward, London (1975)
9 **Poole, S** *Trigger Happy: The Inner Life of Videogames* Fourth Estate, London (2000)

craggy volcanic island strewn with structures and mechanical devices in various states of repair) you soon discover that the player must journey round the island to rotate and align a series of optical devices, an exercise in simple repetition. Similarly, in *Tomb Raider*, there are micro-challenges, where the player must repeat a jump to grab a rope. There are also more strategic repetitive tasks such as visiting a succession of symmetrically arranged spaces to solve discrete puzzles. The reward for solving each puzzle is a token or its fragment. After each recovery, the player returns to a central room to position the pieces, the sum of which unlocks access to another complex of spaces.

We commonly think of repetition as a means to an end. In algorithmic or AI terms repetition is a means of searching an array of possibilities. Operations are repeated to explore permutations. In fact the goal might be to minimise the repetition of tasks. Trying every single ordering of digits on a combination lock involves us in mindless mechanical repetition. The game task is to look elsewhere for the combination to avoid the repetition. It may also be the case that the opportunity to get out of a repetitive loop constitutes a reward. Visiting and re-visiting the same places seeking the combination, the key, or the talisman, may frustrate the game player, and there is great relief when the repetition is ended.

But there is also evidence that the game play is precisely to ensure that we repeat, and if we are tired of one particular repetition, then the game plan ensures that repetition continues, though perhaps in a different setting. By this reading repetition is the end, not the means. Support for this view comes from Freud's account of the nature of repetition and compulsion in psychology[10]. His famous example is that of the child with a cotton reel tied to a piece of string. The child throws the reel out of his cot only to haul it back in again, and he does so repeatedly, as if gaining comfort from the action. For Freud this to-and-fro movement of the game is a response to the child's despair at losing sight of his mother as she periodically enters and leaves the room. For Freud, this is the condition of us all, coming to terms with the loss of comfort and the loss of security of the mother's presence. In certain cases Freud would identify such repetitive behaviour as pathologically obsessive. But most of the time such enactments or encounters with repetition are simply reminders of this primal conflict: loss of the mother, and all she symbolises, with oneness, nurture, and so on. For Freud[11] such reminders, through repetition, invoke a sense of the uncanny. It strikes us as strange when some event, such as a repetition, reminds us of our childhood condition, as if to re-confirm or reinforce that which we thought we had grown out of. Repetition represents a kind of reversion to early adolescence. In this it is both a comfort and a source of

10 **Freud, S** 'Beyond the pleasure principle' in **A Richards** (ed.) *The Penguin Freud Library Volume 11: On Metapsychology*, Penguin, Harmondsworth, UK (1990) pp 269–338
11 **Freud, S** 'The 'uncanny'' in **A Dickson** (ed.) *The Penguin Freud Library Volume 14: Art and Literature*, Penguin, Harmondsworth, UK (1990) pp 335–376

disquiet. Here resides the sense of the uncanny, the unhomely. We are at home with the repetition, but there is no-one home. We do not really belong with this condition.

By this Freudian reading, computer games are capable of causing disturbance in many ways, not least in the way they require us to repeat. The theatrical, painterly and architectural invention behind the spaces created in computer adventure games are certainly capable of invoking a sense of eeriness and the uncanny, no less so for being relatively devoid of inhabitants. The islands of *Myst* and *Riven* submit to the description of being uncanny in that they are relatively unpopulated. The player seems to arrive at a place after the population has left. There are the trappings of home, but no-one is around. Once she has dispatched the machine-gunning henchmen, Lara Croft explores the Moorish City of the Dead. The market squares, shops and alley ways are empty. This emptiness undoubtedly invites a sense of the uncanny, but for Freud, it is in the necessity to repeat that we should look for this sense of the uncanny, not merely vacancy. Freud's[11] account of being lost in the city streets could well be describing the state of a computer game player:

I hastened to leave the narrow street at the next turning. But after having wandered for a time without inquiring my way, I suddenly found myself back in the same street, where my presence was now beginning to excite attention. I hurried away once more, only to arrive by another detour at the same place yet a third time. Now however a feeling overcame me which I can only describe as uncanny (p. 359).

Empty spaces, combined with the mechanical possibilities of repetition on keyboards and game pads, invite repetition. Without human encounters to arrest our movement we are free to continue the circulation. Spaces become circuits on which to run rampant, in furious search, and where is there to go, but around and around in unimpeded repetition. By this reading it is the repetition, or its prospect, that disturbs and fascinates, a feature of vacant space made all the more obvious in computer games.

Philosophical discourses invoking repetition take on a peculiar turn. Taking his lead from Freud's provocation about the uncanny, Derrida[12] maintains that we should not be surprised by repetition so much as the idea of a first time. Repetition is the norm. We are always caught up in an endless stream of repetitions. For Derrida this is how language operates. There is no original referent of a language utterance, such as an actual game, a psychosis, a first move in a computer game. Every utterance invokes reference to former referents, which in turn have their referents. For Derrida, Freud's repetition of the story of repetition in his voluminous writing is but a

12 Derrida, J 'Freud and the scene of writing' in *Writing and Difference*, Chicago University Press, Chicago, IL (1978) pp 196–231(trans Alan Bass)

repeating of Freud himself. What does Freud uncover in the unconscious of the patient but Freud. Whether or not this discourse advances the study of psychology, it certainly signals the ubiquity of repetition as a philosophical and cultural concern. It also suggests that in the computer game the repetition is not just of moves and counter moves, but a repetition in a lineage of gaming. As in most examples from the mass media, art and design under the influence of mechanical and digital reproduction, there is a repetition amongst game designers, which is to say a direct copying in whole or in part of game plans, weaponry, characters, styles, and genres. And the game player repeats the playing experience, with the same game, with the continuous stream of successor games, and now game players are invited to design their own game levels (with level editors provided by the game companies), to participate in an endless frenzy of derivative gaming.

Whether or not we accept Freud's psychological account of repetition, the provocation is that our propensity to participate in repetition, to tantalise ourselves with the uncanny, is a primordial condition, or at least it is as entitled to this claim as the Cartesian claim of the primacy of calculative reason, or self awareness. The game relies substantially on repetition for its impetus, and this repetition is an end in itself.

Whatever the goals or quests of the game, these work to enable us to keep on repeating. If this is true of play, then it also applies to design. Design is already imbued with the repetitive impetus, through historical reference, copying, mimicry, and the workings of the play of meaning, right through to the labour of drawing and drafting, the repetition of elements, CAD operations and the seemingly endless rendering of line and colour. The end of design is to keep on repeating. As we shall examine subsequently, the idea of repetition needs modification if it is to bring us closer to a hermeneutical account of the game.

2 *Variation*

We have mentioned the subservience of goals to the act of repetition, but said nothing yet about variation across repetitive operations. Computer games rely substantially on the concept of levels: degrees of difficulty, and increasing levels of challenge. In *Space Invaders*, targets and return-fire from the computerised opponent are calculated to arrive with increasing frequency, and once one level of encounter is completed the player progresses to another level of difficulty. In *Tomb Raider*, movement from one environment, a sequence of connected spaces, to the next, is accompanied by greater challenge. Progression to the next level comes as a reward. The task seems to be to escape from one level and enter the next. A game level is also regarded as discrete. It is a way of organising computer files into

manageable chunks for loading into the computer's RAM. Levels are also progressive. It is usually outside the game plan to revert to an earlier level. Levels may also be arranged in a linear fashion, where there is one exit and entry point between any two levels, and you may only be able to pass through the levels in a predefined sequence. The presence of levels is more obscure in games such as *Myst* and *Riven*. There are discrete environments, increasing degrees of challenge, and the idea of access to environments as an incentive and a reward, but here the idea of levels is overtaken by the more obvious unfolding of a narrative. The aspects of progression and variation in computer games can inform us about the nature of repetition in all genres of computer games, and leads us to consider further the hermeneutics of the game.

If repetition stakes a claim in a psychological and linguistic legacy, then the concept of levels makes a similar cultural claim. Homer gave expression to the ancient religious legacy that after earthly existence one enters a netherworld of spectres and shadows, the insubstantial world of the dead. Plato reversed this priority by attributing our earthly existence to the shadow lands, while what exists beyond is a greater and higher reality. His positing of a world of ideas, the Intelligible, to be contrasted with the sensible realm solved all kinds of philosophical difficulties (and created others) about universals, perfection, generalisation, identity, mind and memory which we do not need to revisit here. Plotinus was Plato's foremost successor who developed this dualism. He gave elaborate expression to the dual divide as a series of levels, through which we progress to achieve enlightenment. The soul wends its way heavenward through successively enfolding spheres of existence. This powerful sense of hierarchy and of a successive layering of transcendence informs the Romanticism of the seventeenth century, and much fantasy narrative[13]. The quest is for enlightenment, the progress to a realm where the mysteries of being will be revealed.

The idea of layers also appeals to our empiricist orientation. If one can transcend the current level of partial knowledge to achieve higher understanding, one is getting closer to the truth, an understanding of the way things really are. By a simple metaphorical reversal this is also an uncovering. The truth is buried down there if only you can strip back the layers of obfuscation to find it, as if working through layers in an archaeological dig. Freud's presentation of the unconscious also accords with this account. The unconscious is the site of buried and repressed memories, the traumas of separation from the mother and threat from the father, manifested in such phenomena as disquiet at the spectre of repetition. Like a benign tomb raider, it is the job of the analyst to uncover the unconscious, a cathartic and liberating process.

13 **Coyne, R** *Technoromanticism: Digital Narrative Holism and the Romance of the Real* MIT Press, Cambridge, MA (1999)

The propensity for computer games to invoke transitions through levels also resonates with Freudian concepts of the rite of passage. What has been said of Lewis Carroll's *Alice in Wonderland* and *Through the Looking Glass* can be said of *Tomb Raider* in this regard. Both offer male accounts (as does Freud) of what might constitute self-assured female ambition and self discovery in cultural contexts where such assertiveness is unexpected. Freud weaves a complex narrative of the unresolved need for the young girl to regain erotic attachment following estrangement from her mother. This is accomplished through the offering of gifts to the father, or father substitutes, the ultimate gift of which is a baby. In the mean time various symbolic substitutes suffice. Alice's polite offerings of congeniality (and a baby turned into a pig) to the various male figures she encounters are nothing to Lara's obsessive offering to male deities of found trinkets (keys that move her to the next level). The rite of passage is chiefly a matter of the young woman maturing past the trauma of believing her mother responsible for her castration (and not being a boy). The passage is from a state of anger with the mother to a relationship of giving to her surrogate father. Alice moves through the worlds of Wonderland or across the looking glass chess board in successive stages that mark her coming of age. Lara moves inexorably through game levels. It does not matter for this reading that the rite of passage is repeated, such is the psychology of repetition. In fact, as noted above it is not the fact of repetition that should cause us disquiet. We should take it for granted that events in our experience repeat. What is strange is that we think there should be a defining moment, a first time, an original trauma to be uncovered and resolved, a single rite of passage to be negotiated.

Irrespective of our view of Freud's account of what motivates men and women to action, there are alternative interpretations of what Freud describes as an uncovering of the unconscious. Paul Ricoeur[14] argues that psychological analysis need not presume the uncovering of a deeper level of psychic reality. It is rather the case that the analyst and the patient are engaged in the work of transforming one narrative into another, perhaps transforming a narrative of always being 'hard done by' to a narrative of failing to pass through the Oedipal stage. The transition from one narrative to another is never friction free. There is resistance, work to be done in affecting the transformation, as in a game. This is in the nature of all interpretation, and offers an alternative account to that in which the analyst presents as uncovering the truth of what the patient actually means, the unconscious motivations behind the words, or to see the interpretation of a text as discovering the original intention of the author. Interpretation presents as a transformation of narratives, a variation on our earlier formu-

14 **Ricoeur, P** *Freud and philosophy: an essay in Interpretation* Yale University Press, New Haven, CT (1970)(trans Denis Savage)

lation of interpretation as an encounter between one's expectations and a text (or a design). Interpretation is an on-going dialogical process.

Computer games of the narrative kind more closely resemble the interpretation of a text. As in the case of a detective story, one of the intrigues of the *Myst* games is to try and discover the canonical story created by the authors from the clues and the fragments of text left around the worlds. Whether or not the player wishes to uncover the story is not essential to the game play, though it does make sense of the puzzles to understand, or perhaps suspect, that the vengeful character in *Myst III* has messed up the simple ball puzzles on the island where the wayward sons were meant to have had their lessons. Though ostensibly motivated by a desire to uncover the true story, a detective story also gains its allure by the interaction between the evidence and the array of possible stories. It is never just the uncovering of a true narrative, and where the truth is revealed the story loses its allure, as when one encounters magazines and web sites that offer to reveal the computer game's story in all its completeness.

If we thought the *Myst* narrative worthy, like all stories, it is open to interrogation and analysis. Though the story line appears fixed, any story is open to reinterpretation and retelling. Each visit to the game presents a new edge to the narrative, enhanced by the varying meta-narrative of how the clues provide or fail to provide sufficient evidence for the canonical story, not to mention the relationship between the various endings on offer. Repeated encounters with the game also provide opportunities for reinterpretation. Having examined the mechanical island perhaps the organic world of the tree island presents as even more startling. The encounter with one 'level' informs our encounter with another, by contrast, by playing on our expectations, conditioning and modifying them.

But then the same process applies to our encounters in any game. *Tomb Raider* depends less on a story line, but invokes variation on each encounter. The player's encounter with a succession of similar spaces plays on variation. What strikes us as a stable platform in one space is a trap in another. The game is repetitive certainly, but each encounter provides an opportunity for reinterpretation. Repetition can lull us into a particular mode of expectation, only to have that expectation broken or contested by a breach in the series. *Myst* plays on the idea of a breach in a sequence. There is an optical device missing from the configuration on the island described above, which turns the task of their alignment into more of a challenge. All of the islands in *Riven* are within view of each other except one, the discovery of which takes the player into a new level of engagement with the game. Other parts of the game world start to make sense.

Design too succumbs not just to repetition, but variation across repetitive operations. The design methods' movement established that a design progresses through layers of sophistication, from abstract to concrete. But a hermeneutics of design would suggest that we are always dealing with successive interpretations, the transformation of narratives, perhaps from a story about the design in terms of shapes, maps, and metaphors to one of systems, walls and uses, with lapses from one narrative to another. Each encounter with a design situation is accompanied by variation, whether for the designer revisiting the plans, the building user walking into the building yet again, or the architectural critic looking for something new to say.

So the concepts of repetition, and of the level, submit to the operations of interpretation, sometimes described in terms of the hermeneutical circle, a to-and-fro movement between the whole picture and part of the picture, the context and the particular, a play of shifting expectations, whether in the computer game or design.

3 *Game ethics*

It is a commonplace to note that not everyone likes watching (and critiquing) the same genres of film, and there are no doubt individuals who are indifferent to the pleasures of watching movies at all. In the same way computer game players may prefer action games to flight or racing car simulators, or adventure or role games. Undoubtedly there are many for whom the computer game is a matter of repugnance or indifference. They are not prepared to invest time and money in hours of game play and do not see the computer or game console as providing a suitable environment for leisure, or they do not enjoy solving arbitrary game puzzles. Film makers and film audiences are not necessarily averse to being amongst a minority of genre buffs. Budgets for computer games are now apparently on a similar scale to block-buster films and so are less capable of catering to niche markets. They require very large sales to make profits. Computer games therefore cater to mass markets, pandering substantially to trigger-happy male youth culture, and are readily placed beneath the classic divide separating low from high culture. Computer games bear the accusation of being sensationalist, overly-sentimental, extremely violent, and historically and culturally naïve[6]. They are populated by exaggerated, stereotypic, comic-book characters, accommodated within architectural and geographical pastiche. Fast action seems to require exaggerated form, colour and spectacle. Perhaps the worst charge is that computer games do not stretch the medium beyond a technical agenda of faster response, greater photorealism, more rendering power, more detail, cleverer AI. There is little scope in computer games for the same experimentation that accompanies digital media art and its forays into new modes of interaction and novel concep-

tions of space. Gentler, design-oriented games such as those in the *Myst* series could be accused of being no less mawkish, with the heavily-romanticised art nouveau, the expressionist and high-tech derivation of the architecture, and landscapes that draw on the languages of picturesque and sublime art and new-age naturalism, and with story lines that are derivative, quasi-epic, Oedipal tales of family frailty and affection. With rare exceptions, computer games do not yet indulge in the self-referentiality, or the ironic twists and turns of contemporary artistic and narrative invention. At most, *Tomb Raider*, *Myst* and *Quake* can be generously described as fitting within the genre of high-camp art, perhaps a simulated naivete, a naivete that accommodates the suspicion that someone in the design team at least sees the whole enterprise as a send up, or perhaps an art form that gains its status by virtue of its capacity to attract and withstand good natured ridicule.

Irrespective of taste, the appeal of an artefact to the sensibilities or otherwise of communities of users, computer games must withstand various ethical charges. Stallabras[6] accuses computer games of presenting a kind of miniature capitalism, a simplistic world of points, scores and credits, where human life is reduced to commodity and number, though one could argue that non-computer games also work with this fiction. The usual complaints are that computer games risk promoting violence, using human beings for target practice, or at least may inure us to battle and war. Computer games often present screen displays as elaborations on the idea of the gun sight, which increasingly bear a resemblance to the images one sees on news broadcasts of precision strikes by automated weaponry[15]. We become inured to the horrors of killing and maiming, all but masked by the indifferent spectacle of pixels hitting their target.

In this the consumerist enterprise that is the computer game labours under its harshest critique, as a mode of concealment. Whether tomb raider or archaeologist, Lara Croft presents as uncovering lost treasures, unlocking portals revealing successive levels of the game to an encounter with the secret of it all, the divinity (a supposed battle with the Egyptian god Horus in *Tomb Raider The Last Revelation*), ever closer to the ultimate challenge. But in fact, under the ruse of the game, Tomb Raider presents a classic narrative of colonisation and conquest. In the tradition of the Phantom, James Bond, and Indiana Jones stories, Tomb Raider participates in the invention and pillaging of the exotic other. The game designs loot imagery, mythology, architecture and culture from countries that have historically been subjected to successive waves of conquest by Western powers. The world is turned into a highly stylised arena for technologised instrumental magic. Built artefacts (monuments, temples and tombs) are valuable in so

15 **Baudrillard, J** 'The gulf war did not take place' in **M Poster** (ed.) *Selected Writings*, Polity Press, Cambridge, UK (2001) pp 231–253

far as they house trophies, the magic of which resides in their capacity to act as a key to further conquest. Of course the aristocratic Lara Croft presents as an exoticised parody of the stereotypical femme fatale, designed to appear as desirable as the trophies she seeks.

The game also presents a case of technological concealment and enframing. By the constancy of her bodily comportment, Lara Croft is shown to be indifferent to whether she is in Angkor Wat, Luxor or Venice. Whether or not she can run up a sloping surface depends on a geometry set up in the gridded world of the level editor, not on local custom, constraints of propriety, climate or other exigencies of place. *Myst* purports to be non-violent, but it is charged with the undercurrent of creating and destroying civilisations, the colonisation of worlds. The domestic conflict, the destruction of the sons, is relatively benign in comparison to the underlying conceit of literacy, that writing books brings worlds into existence, which then become inhabited by populations of compliant savages who treat their highly educated creators as gods.

But there is a more subtle charge. Notwithstanding the possibility that players or communities of players may fall under the spell of such games and be swayed by their apparent reality to see them in other than a critical light, there is the prospect that such games inure us to the possibility that the rest of our experience is also constituted by illusion. By virtue of the obvious nature of their unreality, games inure us to the unrealities presented by global capitalism. This is the familiar charge of Baudrillard[16] against Disneyland theme parks and similar simulated environments. We are inured to the fact that the city of Los Angeles, and the country of America beyond, is an unreal simulation. Life under capitalism is fraught with the trappings of unreality: "today, reality itself is hyperrealistic" (p. 149)[17]. Experiences that purport to show us in a highly conspicuous way what is unreality, as in the case of the spectacle of the computer game, distract us from identifying the less ostentatious unreality in our day-to-day world. So the inventions brought about by the prosaically real computer spreadsheet could be construed as unreal, raising expectations, giving credence to narratives of improvement simply by virtue of laying things out in tabular form. If a spreadsheet program bore more of the trappings of a computer game we might be more correctly suspicious of what it presents. If a business report appeared from a scroll discovered by Lara Croft from within the fictional Tomb of Seth that might show more accurately its spurious purchase in the realms of truth and reliability. (According to Baudrillard (p. 267)[18], it is not fiction that should cause us to laugh, but it is any claim to truth that is obscene or risible.) By this reading, the danger is not that the increasing sophistication of computer games causes us to lose track of the fact that

16 Baudrillard, J 'Simulacra and simulations' in **M Poster** (ed.) *Selected Writings*, Polity Press, Cambridge, UK (2001) pp 169–187
17 Baudrillard, J 'Symbolic exchange and death' in **M Poster** (ed.) *Selected Writings*, Polity Press, Cambridge, UK (2001) pp 122–151
18 Baudrillard, J 'The perfect crime' in **M Poster** (ed.) *Selected Writings*, Polity Press, Cambridge, UK (2001) pp 266–275

it is only play, but that we see the rest of our experience as other than play, as serious work, as outside the realms of contingency, as outside the workings of the hermeneutical circle.

The ostentatious simulation of computer games brings into relief the nature of design. Insofar as we accept the claim of the design methodologist that the process of design is constituted by successive iterations through cycles of repetition and simulation, we are inured to the fact that the design never reaches finality as simulation. The building or the manufactured artefact is still a simulation, as much as the models, drawings and computer representations. By this critical reading there is no end to the representational aspect of design, and to the charge of concealment.

4 Concluding remarks

This criticism of computer games works in the manner of a reversal. The real and the imaginary are presented as if a play of opposites. Global capitalism is the unreality, masked by the very real obviousness of the game's unreality. Not only does this critique advance a challenging ethical case against the computer game, an invitation to further suspicion of global capitalism, but it also advances our appreciation of play. The ethical question emerges as a matter of play, the play between conflicting points of view or formulations. Ethical questions are not 'resolved' by appealing to a substrate of unassailable truth, rules of right conduct, but more closely match the rules of play. In linguistic terms this is to play according to the rules of the game of dialogue and negotiation. Resolution is chimerical. In the public arena questions of ethics are repeatedly brought back into play as contexts and values change. Conservative moralists so often see this revisiting of ethical issues (about displays of violent and erotic imagery, or the amplification of materialism) as a progressive liberalisation, a loosening of standards. But on closer examination, insofar as there is a liberalisation it constitutes a developing recognition of the complex play between value systems, institutions, socio-political contexts, the roles of the mass media and the culture of the contemporary video game generation. It is also a recognition of the play element in human affairs, and in design.

Repetition is ubiquitous in play, and under the hermeneutical account, the Freudian interpretation of repetition gives way to the primacy of narrative and its transformation. So too, the neo-Marxist account of the dehumanising and repetitive nature of computer gaming gives way to an account of the ethical in terms of the play of difference. This account accords with Huizinga's[7] analysis of law (and the ethical) as having its origins in play, the agonistic contest between adversaries. If the law is subject to the workings of play then so too design, as the contest between calculation and

play, an object and its simulation, the original and its repeated copying, repetition as a means or an end, representation as correspondence and representation as play, the conscious and the unconscious, the whole and the parts, object and illusion, revealing and concealing. The game goes on.

Appendix A. Discussion
(Discussant: Bryan Lawson, School of Architecture, University of Sheffield, UK.)

BL: There are three points here that I think are interesting. The first is the idea of repetition. You mention Derrida's point that repetition is a normal part of life, we should accept it but that we might feel in a world that is changing and uncertain the temptation to retreat to a world that is certain, and where repetition becomes greater.

Secondly is the idea that computer games are not like play. I thought it was interesting the way you say that design is like play in many ways and I agree. However, it seems to me that computer games are a very special sort of play; they are in an enclosed world for example. Perhaps the biggest difference is that they almost entirely remove the notion of social interaction and most play—as opposed to games—hinges around social interaction. If we for example ask why children like computer games so much then we might think that it is the first time they have the opportunity to act upon the world having something to control rather than have the world act on them. This is a very attractive seductive, maybe habit forming, experience. Maybe we can think of designers as people who never grew up, that they continue to need to act on the world in some way or other.

Finally is this question of the uncanny. I think this relates to the second point: the idea of the uninhabited world. To me that makes them boring because they don't have any people. Like this town that you enter; people obviously were there because it is man-made but they are not there anymore. So this is another way of not relating to people. Why is it that schools of architecture in recent years seem so interested in this world? I think it is because it gives them another way of avoiding people or at least avoiding three dimensional people. This is an extremely child-like or maybe childish world that perhaps we shouldn't encourage designers to have.

RC: First let me say that I'm not an apologist for computer games although I have played them. Yes I suppose there is this issue of being on your own and controlling this world. There is another genre of game though, so called 'multi-user' games that you have on the internet, for example *Quake* and

Doom. There's limited interaction but it is interaction. I wonder about other games like chess and scrabble which are very atomic with individual pieces and simple scores. They are a reduction of the world but you are interacting with people around the game board. They provide a forum which is unthreatening (or at least low risk). With a computer game that's not so much the case although there is often a culture that develops around the game made possible by the world wide web. There is also now a culture of designing your own game.

Questioner 1: I think the issue for design is not a lingering childhood but a persistent adolescence. Adolescents actually socialise around their individualising of the game. I think repetition and variation occur but not at a childish level.

RC: There is a tradition of talking about creative enterprises as being child-like. Creativity frees up the child within and this goes back to how Rousseau and the Romantics saw education as stripping away the strictures of society to get back to the child-like condition. In the design world if you say to a designer oh you're just playing that doesn't strike me as pejorative. If you said that to any other practitioner, a judge or a lawyer for example, that would be seen as pejorative.

Questioner 2: In terms of cognitive science repetition plays a formal role in learning about the environment. What's interesting in what you're saying is that maybe the repetition in computer games is ideological. So what is reinforced through repetition is ideological. I think that's a dangerous thing if we are talking about unconscious learning.

RC: I don't agree. I think we have a compulsion to repeat; repeating is an end in its own right. If you are talking about repetition as reinforcement for brainwashing purposes then of course I agree. Let's take repetition away from brainwashing and ideologies. It belongs to all of us.

BL: Within the psychology of skill development repetition is used as a way of making a conscious skill unconscious, but this isn't cognitive development. It seems to me that design *is* about cognitive development.

RC: Certainly there's a cognitive and psychological understanding of these phenomena. Foucault describes the way that power relations are inscribed in the body and its movements, and as we discipline one another we order our society around repetition. Children march to school or we conduct ourselves in ways that implicate repetition. I think looking at it like that is productive from a design point of view.