

Play: A Procrustean Probe

Tom Tyler

Oxford Brookes University, UK
procrustes@cyberchimp.co.uk

ABSTRACT

The brigand Procrustes dispatched his victims by stretching or trimming their bodies in order that they be made to fit his bed. Considered as a *scientific theory*, McLuhan's four "laws of media" risk violating research in a dangerously Procrustean manner. Conceived as an *exploratory probe*, however, his "tetrad" can provide illuminating insights into the social and psychological effects of individual technologies. Applied to digital games, the tetrad reveals the particular ways in which this distinctive cultural form *enhances* diverse modes of play, *obsolesces* traditional television viewing, *retrieves* lost means of participation, and *reverses* into pervasive and persistent play. The tetrad helps us to *situate play* within the broader technological and cultural environment.

Author Keywords

augment, enhance, extranoematic, game, McLuhan, obsolesce, participation, persistent, pervasive, play, Procrustes, remediation, retrieve, reverse, technology, television, tetrad, Theseus.

PROCRUSTES' BED

Before he slew Asterius the minotaur, the Greek hero Theseus undertook a series of six labours, not unlike those of Heracles. Setting out from Troezen to Athens, he freed the road from the bandits preying on those who used it. He dealt with each miscreant in the manner in which they had terrorised travellers: Sciron the Corinthian he kicked into the sea, where swam a giant man-eating turtle; Cercyon the Arcadian he bested in a wrestling match, lifting him by the knees and dashing out his brains; and so on. The last of the bandits was named Procrustes and had a peculiar means of dispatching his victims. Having offered a night's hospitality to the unsuspecting traveller he would compel them to lay down on a bed. Those who were too short he would stretch or hammer to fit, and those too tall he would cut to size. Theseus dealt with him as he had the others, though it is not recorded whether he himself needed to employ a rack or a saw.¹

In order to examine the question of situated play I will deploy a theoretical approach outlined by Marshall McLuhan, the Canadian writer on communications technology. This particular McLuhanesque method is itself in danger of operating according to Procrustean principles: that is, bothersome empiric elements which do not fit the

theory are hammered or shorn in order that they be *made* to fit. But I think that, with sufficient caution, the approach can be adopted whilst allowing head and feet to remain intact, and further, that the resulting application can be genuinely illuminating with regard to digital gameplay.

In the mid 1970s McLuhan proposed what he called the "Laws of Media", a rigorous means of investigating "the operation and effects of human artefacts on man and society" [20].² McLuhan claimed that there are four such laws, which he collectively called a *tetrad*, and that they could profitably be applied to technologies as diverse as the wheel, cable TV, the Xerox, elevators, railways, clothing, housing, money, numbers, and much more besides. The four laws take the following form:

- (1) a technology will *amplify* or enhance some aspect of human experience or society;
- (2) a technology will *obsolesce* some aspect of human experience or society;
- (3) a technology will *retrieve* some aspect of human experience or society;
- (4) a technology will *reverse* or "flip" into something else.

For example, we can apply these four laws to the technology of radio.³ This *amplifies* the human voice, providing "simultaneous access to the entire planet" [20]. Previously such a mass audience was only possible asynchronously, by means of print. The advent of radio *obsolesces* print media to the extent that, for instance, breaking news is now much more likely to be received across the airwaves than by newspaper. Live broadcast supplants, or at least changes the reception of, delayed accounts and recorded transcripts. Radio *retrieves*, we might argue, the town crier, the chief means of news communication in a pre-literate age. The crier, who, like radio, makes direct public announcements at a specified time and to an attendant audience, had himself been eclipsed by print media. And finally, the immediacy and involvement of radio broadcasts, pushed further, *reverse* or "flip" into the audio-visual medium of television. The amplified town crier to the global village can now be seen as well as heard.

McLuhan's laws of media, it has to be said, lend themselves to somewhat selective application. McLuhan asserted that they constituted testable hypotheses, and were a "scientific

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method” modelled on Popper’s principle of falsifiability [19, 20]. His son, Eric McLuhan, even suggests in *Laws of Media: The New Science*, co-written with his father, that “they can be asked (and the answers checked) by anyone, anywhere, at any time, about any human artefact” [21]. This is not, in fact, the case, as one of the McLuhans’ own examples illustrates. Applying the tetrad to the human artefact of *wine* in order to discover its effects on individuals and society, they argue that it enhances “grape juice” (via fermentation), obsolesces “commonplace flavours”, retrieves “ritual observance”, and reverses into “cooking wine vinegar” [21]. Or, at least, these are the answers the first time they apply the tetrad. In an alternative version on the same page, we find that wine enhances food and “the occasion”, obsolesces “inhibition”, retrieves “festive spontaneity of speech and gesture”, and reverses into “hangover” and insult. If the authors themselves seem unsure as to the consistency of the results of the tetrad’s application, it seems unlikely that the same results will be achieved by “anyone, anywhere, at any time”. Conceived as a universal “scientific method”, the tetrad is far too vague: a sufficiently creative mind can imagine, for almost any human artefact, a huge range of things which it might be considered to augment, obsolesce, retrieve, and reverse into. The laws of media do not lend themselves to falsifiability at all, since empirical examples can readily be stretched to fit. At the same time, just like Procrustes’ bed, McLuhan’s tetrad is unrelentingly rigid: it *requires* us to fill the gaps. Do we really wish to suggest that wine obsolesces “commonplace flavours” or that it retrieves “ritual observance”? Perhaps, but we do violence to these complex notions when they are hewn to fit the tetrad’s frame.⁴

The idea that these are “scientific laws” in anything like the sense in which we ordinarily use the term is preposterous. And yet the tetrad has its uses. In fact, it is best conceived, as McLuhan himself often did, as a set of questions: *what* does a technology enhance, obsolesce, retrieve, and reverse into [20]? Like so many of his productive (and provocative) insights, the tetrad is most effective as a “probe”, a means of investigation. As McLuhan said, “I don’t explain - I explore” [18]. In asking what a technology enhances, obsolesces, retrieves, and reverses into, we require ourselves to examine its “operation and effects”, that is, the changes it engenders within its social and historical context. We force ourselves to attend to the consequences of the artefact *in itself*, rather than to the significance of particular instances, such as the meanings and messages of individual radio broadcasts, or the role and import of individual wines (or the occasions on which they are consumed).⁵ The diversity of responses to its application need not be a problem—once we lose the cod-scientific rhetoric—so long as these provide illuminating insights. The tetrad thus has the potential to help locate a particular technology within the broader technological and cultural environment.

It is by means of McLuhan’s tetrad, then, that I would like to locate digital gameplay within the environment of which it is a part. By asking these four key questions we can explore the relationship of digital games to other media and to those who play them. McLuhan suggested that “(e)very medium is in some sense a universal, pressing toward maximal realization. But its expressive pressures disturb existing balances and patterns in other media of culture” [16]. He described such interplay as a civil war, “that rages in our society and our psyches alike” [17]. More recently Bolter and Grusin have argued that “(a)ll currently active media (old and new, analog and digital) honor, acknowledge, appropriate, and implicitly or explicitly attack one another” [6].⁶ It is the complexity of this exchange between different forms of technological antagonism and dependency that the tetrad can be used to investigate. In what follows I will employ the tetrad to probe the impact of digital games, which is to say that I will be exploring precisely the question of *situated play*, the place that this technology occupies within the social, cultural and psychological landscape.

McLuhan believed that the tetrad provides “an ordering of thought and experience” [19], and it is my argument that ordering our thinking and experience of key aspects of digital gameplay by means of his probe allows us both to situate that play within the broader media environment, and to address some of the common conceptual misunderstandings that have accumulated around its analysis. Such an ordering has the potential to generate fresh insights and understanding of familiar territory, but is at the same time prone to the brutally systematizing procedures practiced by Procrustes. The challenge, then, will be to ensure that our probe works ultimately *for* us, as did the bed for Theseus, lest we find ourselves in thrall to our own technological invention, as happened to Procrustes.

ENHANCING PLAY

In a much discussed article entitled “Bowling Alone: America’s Declining Social Capital” [26], the political scientist Robert Putnam observes that “more Americans are bowling today than ever before, but bowling in organized leagues has plummeted” [26]. He takes this to be illustrative of a widespread trend toward increasing social disengagement in many areas of contemporary American life. Reviewing research from a variety of sources, Putnam argues that “social capital”, a collective term for those “features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit” [26], is on a downward spiral. One of the several root causes that Putnam suggests might be to blame is the “technological transformation of leisure” [26], such as the solitary consumption of TV, movies and videos, at the expense of “more primitive” and socially-oriented forms of entertainment. He speculates that this trend is set to continue with the “‘virtual reality’ helmets that we will soon don to be entertained in total isolation” [26].⁷

Borrowing from Putnam's work, Arthur Berger has characterised digital gameplay as further evidence of this shift toward "bowling alone" [5]. Berger suggests that digital game playing is, by and large, a "lonely activity" which creates a distance between game players and others. This solitariness "may lead to alienation and various problems caused by this alienation" [5]. There are many things wrong with Berger's appropriation of Putnam, with his extrapolation of "bowling alone" to digital games, and indeed with his entertainingly superficial book as a whole, but I want to focus for a moment on the implication in both Berger and Putnam's texts that game playing is fundamentally social, and that solitary bowling or digital gaming is therefore in some sense a debased or deviant form of play.

The inference here seems to be that digital games are like "normal" play—team-based bowling for instance—but with the vital social element missing. But there is, of course, a long history of solitary or solo play which precedes the development of digital games. There is evidence that the traditional board game known as Solitaire (UK) or Peg Solitaire (US) was played in the late seventeenth century, and the family of card games called Patience (UK) or Solitaire (US) dates back at least as far as the nineteenth century. Pinball machines have their origins in the eighteenth century or earlier, and Japanese pachinko machines probably date to the mid twentieth century. Mechanical gambling games such as fruit machines (UK), slot machines (US) and the fairground Push Penny date back to the late nineteenth century.⁸ More recently role-playing games developed solo variants, such as *Tunnels and Trolls* and choose-your-own-adventure books like the *Fighting Fantasy* and *SoloQuest* series, and many modern board games explicitly provide for the possibility of solitary play.⁹

Digital games are by no means distinctive or deviant simply by virtue of the fact that they permit us to play alone. McLuhan's first law of media helps remind us that solitary digital gaming is no aberration from the norms of social play so much as an extension of a particular kind of game play that has long existed. Digital games can be seen as "augmenting" play in many ways, but I want for a moment to confine my discussion to this question of the significant enhancement of the possibilities for solo play. I do not wish here to engage in debates regarding potentially Procrustean taxonomies of play—distinguishing qualities and kinds of solo gaming for instance¹⁰—but to focus instead on what we might consider a *quantitative* approach to solitary play. Digital games, precisely to the extent that they are enabled by computer technologies, are capable of vastly more *complex* solo play. Digital processing replaces counters, cards and human computation, enabling enormously complicated and responsive rule-sets and representations. Sid Meier's *Civilization* serves as an effective illustration.

Civilization began life as a board game, designed by Francis Tresham and first published by Hartland Trefoil in 1980.¹¹ It is, as board games go, fairly complex, requiring up to seven players to keep track of multiple cards, rules and counters as they compete for territory and commodities around the ancient Mediterranean Basin. Sid Meier's single-player computer conversion, however, elevates the game to a whole new level of complexity. In addition to the computer-controlled players, the nine commodities are replaced, in its most recent incarnation, by thirty-two different resources, the stage is now the entire globe, and the game lasts until 2050 A.D. instead of 250 B.C., with concomitant increases in the complexity of technologies, trade, and warfare, as well as multiple new elements such as religion, culture, city infrastructure, taxation, et al. In theory, perhaps, all these factors could be accommodated within an expanded board game by means of additional playing-pieces, multiple dice-rolls and volumes of tables, but in practice their sheer quantity would make such an undertaking impossible. Computerization of the mechanics of play enables a degree of complexity unavailable to even the most complicated of board games.

Digital games enhance the complexity of solo play in many more ways than just the intricacy of the rule-set, of course. Computer number-crunching underlies the panoply of multimedia elements involved in even the simplest digital games, including graphics, sounds, and the varied means of input (keyboard, controller, etc). Considering such games as a technology, as McLuhan's tetrad would have us do, we can see that it is precisely the fact that they *are* digital, i.e. sustained by computer processing, which allows solo play to be enhanced in such a dramatic and distinctive way. Before enquiring into what digital gaming obsolesces, however, I find myself unable to pass over Berger's suggestion that it is a "lonely activity" which "may lead to alienation". What of the impact of computerization, and the attendant increase in complexity, on non-solitary digital game play?

The experience of playing many digital games is, of course, very far from bowling alone. The increase in the complexity of games has augmented opportunities to bowl with others on an unprecedented scale. Multiplayer gaming is in fact quantitatively enhanced by computerization on at least two levels. First, of course, digital games permit more people to play together at one time than ever before, frequently in associations not unlike the organized leagues which Putnam observed to be disappearing from American social life. The persistent worlds of Massively Multiplayer Online Role-Playing Games (MMORPGs) such as *World of Warcraft* and *Lineage II* permit thousands of simultaneous players to compete and cooperate, frequently forming mutually-beneficial team-based clans and guilds.¹² At the same time, players interact across immense distances, whether we consider the colossal game worlds themselves or the locations of individual players, all connected by means of national, international, and even global servers.

In both cases—the volume of simultaneous players and the worldwide arenas of play—it is the underlying computer technology that permits the scale of digital multiplayer gaming to dwarf that of traditional games.

Technologically, digital games significantly enhance the potential complexity of play, whether we consider the solitary activity which so preoccupied Berger, or the group play that has increasingly become a key element of new game releases, massively-multiplayer or otherwise. In keeping with a tetradic approach, I have characterised this enhancement as a quantitative augmentation, an increase in complexity which pushes digital games beyond a threshold that it would in practice be impossible to cross without the support of computer technologies. There is, doubtless, a case to be made that such a quantitative increase engenders a *qualitative* change in the nature of play, that the increased complexity permits new *kinds* of play, but such an argument lies beyond my objectives here.¹³ I turn instead to McLuhan's second law.

OBSOLESCING TELEVISION

Anecdotal reports from players often suggest that digital games have increased in popularity at the expense of other entertainment media. In particular it seems that many digital gamers are playing games when once they would have watched television.¹⁴ It would appear that digital games are, in McLuhan's terms, moving to "obsolesce" television, or at least to advance on the position it has long held as the prime entertainment medium [4]. To date, relatively few comparative studies, which explicitly include digital games as a factor, have been undertaken into the uses made of different media, but what research there is seems to bear out the reports made by players themselves.

A Dutch study undertaken in 1997 found that the playing of electronic games increased up to the age of 13, after which it slowly declined, but no conclusions were drawn regarding the effect this had on other media, and the data are now 10 years old [cited in 4]. A more recent cross-European study from 2001 explicitly set out to discover "whether the rise of interactive media [amongst which electronic games are the most frequently used] has had substantial consequences for children's media time expenditure" [4]. Their findings suggest that "electronic games have conquered the third position behind television and audio media" previously held by print [4], at least amongst boys, though the impact on television viewing is unclear, and the authors warn that the cross-sectional data they present is "unfit to determine causal relationships" between different kinds of media [4].

More recently, Nick Yee's ongoing research into MMORPGs at *The Daedalus Project* provides perhaps the most concrete data on the relationship between game playing and television: "MMORPG gamers spend on average 21.0 hours per week playing the game ... and spend on average 7.7 hours per week watching TV ... The national average for TV watching per week is around 28, which is what the above averages add up to. In other words,

this lends support to the claim that time that was spent watching TV has been displaced by MMORPG playing" [37]. None of these studies is by any means conclusive.¹⁵ Robert Putnam suggested that the "last refuge of a social-scientific scoundrel is to call for more research" [26], but it is clear that more empirical data is indeed needed if we wish to discover what the enhancement of digital play is at the same time obsolescing.

We must be careful in employing the term "obsolesce" within this context. McLuhan was not claiming that one medium entirely supersedes another: clearly newspapers did not die out with the advent of radio any more than "commonplace flavours" disappeared with the consumption of wine. Rather, McLuhan argued that "the 'content' of any medium is always another medium" [17], a notion taken up and expanded, remediated even, by Bolter and Grusin [6]. In suggesting that digital games in some sense "obsolesce" television, we need not imply that this older medium is eclipsed or replaced. The conflict between media is a civil war, after all, and no technology is ever entirely vanquished. Instead, media are refashioned and revised, appropriated for new (and not so new) purposes. Surveying a range of games and platforms from *Pong* and *PACMAN* to *Myst* and *Virtual Valerie*, Bolter and Grusin argue that computer games provide multiple examples of such remediation, but in closing this section I would like to focus specifically on the besieged TV.

In his influential and much-cited discussion of *Cybertext* [1] Espen Aarseth describes the "extranoematic" effort that is required of ergodic literature, those texts whose consumption entails more than mere "eye movement and the periodic or arbitrary turning of pages" [1]. The reader of the cybertext must assume "extranoematic responsibilities" and enter into a degree of physical engagement with the text in order that a "semiotic sequence" be effectuated [1]. Probing by means of McLuhan's tetrad into the issue of technological obsolescence, we might argue that digital games function as an extranoematic remediation of television. The screen is not replaced but repurposed as the user becomes involved in a form of extranoematic performance. The "nontrivial effort" [1] of play obsolesces the predominantly noematic effort—eye movement and the periodic or arbitrary flipping of TV channels—of earlier forms of televisual consumption.¹⁶ Game consoles appropriate the television set quite literally for the purpose of play, but PCs could similarly be seen as taking this older medium as content. In moving from TV to RPG, Yee's respondents obsolesce television not in the sense that they obviate its existence (they still watch nearly 8 hours per week after all), but rather in the form of repurposing its use: their consumption moves from noematic to extranoematic engagement.¹⁷

RETRIEVING PARTICIPATION

In the chapter of *Understanding Media* devoted to games of all kinds [17], McLuhan argues that these "extensions of

man” retrieve a form of participation and involvement that has otherwise been lost. In ancient and nonliterate societies, he maintains, games were regarded as models of the universe, dramatic enactments of the cosmic struggle. Participation was ritualised and religious, and kept the cosmos on the right track [17]. In today’s literate and highly specialized societies individuals use, during their professional lives at least, only a small sector of their being [17]. Art has become merely a mimetic echo of “the old magic of total involvement” [17]. Games, however, allow us to stand aside from the material pressures of routine and convention and offer a means of participation available to no single role or job. They provide the promise and possibility of a “depth participation” ordinarily denied to so-called civilized individuals [17].

Joost Raessens [28] has argued that digital games partake of three interrelated “domains” of participation: interpretation, reconfiguration and construction. Interpretation of a cultural artefact is a form of participation common to diverse media, and Raessens invokes notions of the active audience to argue that varied engagements with a text, and by analogy with a game, are possible. Drawing on Aarseth, Raessens describes reconfiguration as a combination of “exploration of the unknown”, such as when we move about a game’s unfamiliar world, and selection from amongst the options and actions that the game permits; “reconfiguration” consists in the player actualizing some few of the game’s pre-existing potentials. Finally, construction describes the process either of creating a new game, whether amateur or professional, or of modifying an existing game, a significant but highly specialist means of participation.

The participation specific to computer games, Raessens argues, is characterized by reconfiguration and construction, and also by “deconstruction”, a specialised form of interpretation by which repeated play exposes “the hidden, naturalized, ideologically presupposed rules of the medium” [28]. There is much of value in Raessen’s careful delineation of different modes of participation, and we need not argue that these are *peculiar* to digital games in order to recognise the ways in which gameplay partakes of these “domains”. Reconfigured within the framework of McLuhan’s tetrad, however, it is fruitful to emphasise the extranoematic aspect of all three forms of participation: each requires considerable “nontrivial effort” on the part of the player. Within this context, the extranoematic responsibility that digital games require aligns them closer to those traditional activities discussed by McLuhan—baseball, football, ice-hockey, tennis, cards—than to the noematic television viewing that they remediate-obsolete. Even beyond the most obvious instances of game-prompted physical exertion (*EyeToy*, *Wii*), all digital games, of their nature, necessitate some degree of extranoematic input by means of console, keyboard or controller. Whether such digitally-mediated engagement fully recovers the “integral person” [17], “the old magic of total involvement”, or the

“depth participation” which McLuhan believes was enjoyed by our ancestors will remain, I suspect, a moot point, but that a degree of participation is retrieved by means of the *remediated* TV is undeniable.

REVERSING INTO PERVASIVE PLAY

McLuhan’s final law asks what a medium will “reverse” or “flip” into. When developed to its fullest potential, or pushed to its limits, how will a technology continue to evolve within the existing cultural environment? The question seems to invite wild speculation regarding future developments, but McLuhan himself always urged that one should “Never predict anything that hasn’t already happened” [quoted in 10]. His own flair was always for providing insights into the limits and implications of *existing* technologies. Rash rhetoric frequently claims that we draw ever closer to a *telos* of total immersion, the point at which digital game worlds will become entirely convincing. Today’s digital games, we are urged, will one day give way to a holodeck containing not just Hamlet but every possible aspect of convincing alternate realities. The myth of imminent immersion, which Salen and Zimmerman call the “immersive fallacy” [30], distracts attention, however, from the reversals of today. Pushed to their full potential, digital games flip not into immersion but, I would argue, *pervasive and persistent play*. In combination with a number of other media technologies, games have in many instances become environmental, allowing play to permeate everyday life. The magic circle, if it ever existed, was always destined to be broken [8]. I would like in these final paragraphs to provide three brief examples.

First, we might think of those alternate reality games (ARGs), also known as augmented reality games, which make use of the real world, to a greater or lesser extent, as the arena of play. *In Memoriam* (a.k.a. *Missing: Since January*; Ubisoft, 2003) starts with a traditional PC game installation, using a CD purportedly released by a news agency in an attempt to enlist help tracking down two missing reporters. Players are then required, however, to visit external websites and to receive emails, as they are drawn into the unfolding mystery. Perhaps the best known ARG is *The Beast* (Microsoft, 2001), a complex marketing exercise launched to promote Spielberg’s sci-fi film *A.I.: Artificial Intelligence* (2001). The game lasted three months, during which time players participated in a complex, evolving narrative associated with the movie, following hints and clues distributed by means of specially-created websites, emails, print media and phone-messages. At no point was the game acknowledged as such by its creators, and play was effectively integrated into everyday life. Since *The Beast* there have been similar marketing campaigns such as *ilovebees* (promoting *Halo 2*; Microsoft, 2004), as well as stand-alone commercial games like *Majestic* (Electronic Arts, 2001). More recently Sean Stewart and Jordan Weisman published *Cathy’s Book: If Found Please Call 650-266-8233* (2006), which starts with a print-based journal (including an “evidence pack” of

newspaper clippings, photos, napkin, *et al.*), immediately invites players to “call 650-266-8233” in order to report the “lost” journal, and soon takes them to *MySpace* pages, an online forum, and other multimedia elements.

The economies of many persistent virtual worlds have long since seeped into those of the real world [7]. Virtual items and equipment for MMORPGs, nominally available only by playing the game, can be purchased with real dollars. In parts of the world, where labour is cheap, the practice has reached industrial proportions: so-called “gold farms” in China employ an estimated 500 000 people who “play” the games, often for 12 hour shifts at a time, in order to harvest virtual gold and goods for immediate resale [3, 29]. Websites like *GameUSD* compare the cost of virtual gold between online vendors, whilst *Eye on MOGs* keeps track of currency conversion rates between multiple gameworlds and the real US Dollar.¹⁸ In *Second Life* a number of individuals are now making a respectable living selling virtual services and items, and the virtual property tycoon Ailin Graef (Anshe Chung) notoriously owns assets worth in excess of \$250 000, employing a staff of ten (real) people to manage her estate [29].

Finally, with the spread of digital games from dedicated consoles and computers to mobile phones and handheld devices, pervasive and persistent play is exhibited by the emerging genre of mobile and location-based games [13]. One of the first commercial mobile games, *Botfighters* (2001) from the Swedish developers *It's Alive!* allowed players to choose their robot from a website, and to equip it with enhancements and additional weaponry using Robucks, the game's currency [31, 33]. The game's battles were actually fought across the streets of Stockholm, however, by means of players' standard GSM mobile phones. The phone's cell identification located owners to within a few hundred meters, allowing players to “hunt” one another and to “attack” using text messages. The non-commercial treasure hunt game Geocaching, a digital variant on traditional “letterboxing”, makes similar use of location-based technology, usually a Global Positioning System (GPS) receiver.

PROCRUSTEAN PROBES

McLuhan's laws of media, when applied to digital gaming, help to provide “an ordering of thought and experience”, a systematic means of organising insights and existing observations regarding the nature of this still-emerging technology. Play is “enhanced” in the quantitative sense that the complexity of games is augmented; noematic television viewing is “obsolesced” by the “retrieval” of extranoematic participation; and digital games “reverse”, ultimately, into multimediated pervasive and persistent play. At the same time, the tetrad helps to defuse or dissolve common conceptual misunderstandings regarding digital games. Berger's suggestion that solitary digital gaming increases cultural alienation can be placed within the broader contexts both of traditional solo games and the

enhancement of multiplayer that online gaming makes possible. As yet unsubstantiated claims that digital gaming is supplanting traditional television viewing can be reconceived in light of a more complex mode of televisual remediation. At the same time, the extranoematic engagement that digital games entail aligns them more closely with traditional participatory activities such as sports and card games than with spectatorial viewing. And finally, existing and implicit forms of pervasive play stand as a corrective to inflated claims for the imminent advent of the holy grail of total immersion.

The tetrad is McLuhan's means of marshalling our thoughts, of pulling together what might otherwise seem somewhat disparate and disconnected qualities of digital games. The danger with any theory or schema is that it inevitably does violence to its subject matter. Such violence is redeemed only if the resulting analysis is ultimately constructive, if the probe works *for* us, as did the bed for Theseus, rather than against us, as was Procrustes' lot. The utility of this particular Procrustean probe has been, I hope, that it provides an overview—one amongst many possible surveys—of the “operation and effects” of digital games as they play their part in the technological civil war “that rages in our society and our psyches alike”. The tetrad allows us, in short, to *situate play* within the mediated environment of which it is a part.

ENDNOTES

1 My account of Procrustes' methods is based principally on that of Diodorus Siculus [9]. For alternatives see Graves [12] and Apollodorus [2].

2 See also McLuhan [19].

3 This example is taken from Levinson [15]. For McLuhan's own discussion of radio see McLuhan [20] and McLuhan [17]. See also McLuhan and McLuhan [21].

4 Nietzsche described this Procrustean approach as “fitting new material into old schemes...*making* equal what is new” [24].

5 This is not to say, of course, that there is anything wrong with interrogating the content of specific instances of a technology, just that this is not the only possible approach.

6 I return to Bolter and Grusin's notion of remediation below.

7 Putnam elaborated his essay into book form [27]. I return to this question of the technological transformation of leisure in the next section.

8 Note that, strictly speaking, although these mechanical gambling machines comprise a solitary *activity* they are actually *multiplay* games since they require a succession of players willing to chance their luck by feeding the machines with coins. The games thus entail a kind of asynchronous multiplay since you effectively play with all those who have used the machine before you.

9 We should also not forget the long tradition of playing against oneself with board games such as Chess, Go, Backgammon, et al. On the importance of understanding the “aesthetic” differences between individual and social play, at least from a evolutionary-semiotic perspective, see Myers [23].

10 For an overview of theories of play see Salen and Zimmerman [30].

11 For a history and informative account of *Civilization* see Myers [22].

12 Berger suggests that these online interactions don't produce *real* communities, just as the animated simulation of eating a gourmet meal will still leave its recipient hungry [5]. For concrete research into the nature of online communities see Taylor [34] and Williams et al. [36].

13 On conceptualising the experiences and pleasures of different kinds of media see Kerr et al [14].

14 See for instance the archived discussion from 2005 and 2006 at Yee [37].

15 Similarly indicative but inconclusive data from the United Kingdom can be found in Pratchett et al. [25] and United Kingdom Office for National Statistics [35]. For discussion of childrens' use of digital games see Fromme [11].

16 In drawing attention to this aspect of digital gameplay we are by no means committed to suggesting that this is the *only* form of extranoematic televisual activity: the use of videotapes, DVDs, interactive TV, and even old-fashioned channel surfing all push “trivial” effort toward the extranoematic.

17 I return to digital games' extranoematic engagement in the next section.

18 *GameUSD*. Available at: <http://www.gameusd.com/>; *Eye on MOGs*. Available at: <http://www.eyeonmogs.com/beta/marketwatch/>.

REFERENCES

1. Aarseth, E. J. *Cybertext: Perspectives on Ergodic Literature*. Johns Hopkins University Press, Baltimore MD, 1997.
2. Apollodorus. *The Library*. Trans. by James George Frazer. 2 vols. William Heinemann, London, 1921.
3. Barboza, D. “Ogre to Slay? Outsource It to Chinese,” in *The New York Times* (9 December 2005). Available at: <http://www.nytimes.com/2005/12/09/technology/09gaming.html?ex=1291784400&en=a723d0f8592dff2e&ei=5090&partner=rssuserland&emc=rss>.
4. Beentjes, J. W. J., Koolstra, C. M., Marseille, N., and van der Voort, T. H. A. “Children's Use of Different Media: For How Long and Why?,” in S. Livingstone and Moira Bovill (eds.). *Children and Their Changing Media Environment: A*

European Comparative Study. Lawrence Erlbaum Associates, Mahwah NJ, 2001, pp.85-111.

5. Berger, A. A. *Video Games: A Popular Culture Phenomenon*. Transaction Publishers, London, 2002.

6. Bolter, J. D., and Grusin, R. *Remediation: Understanding New Media*. MIT, Cambridge MA, 1999.

7. Castronova, E. *Synthetic Worlds: The Business and Culture of Online Games*. University of Chicago Press, Chicago, 2005.

8. Copier, M. “Connecting Worlds: Fantasy Role-Playing Games, Ritual Acts and the Magic Circle,” in *Proceedings of DiGRA 2005 Conference: Changing Views: Worlds in Play* (Vancouver, British Columbia, June 2005), Digital Games Research Association. Available at <http://www.digra.org/dl/db/06278.50594.pdf>.

9. Diodorus Siculus. *Library of History* (Books III - VIII). Trans. by C. H. Oldfather. Loeb Classical Library, vols 303 and 340. William Heinemann, London, 1935.

10. Federman, M. “Memories of Now,” in *Receiver 15* (April 2006), Vodafone. Available at: <http://www.receiver.vodafone.com/15/>.

11. Fromme, J. “Computer Games as a Part of Children's Culture,” in *Game Studies* 3.1 (May 2003). Available at <http://www.gamestudies.org/0301/fromme/>.

12. Graves, R. *The Greek Myths*. 2 vols. Penguin, Harmondsworth, 1955-60.

13. Hall, J. “Future of Games: Mobile Gaming,” in J. Raessens and J. Goldstein (eds.). *Handbook of Computer Games Studies*. MIT Press, Cambridge MA, 2005, pp.47-55

14. Kerr, A., Kücklich, J., and Brereton, P. “New media – new pleasures?,” in *International Journal of Cultural Studies*, vol. 9, no. 1 (March 2006), pp.63-82.

15. Levinson, P. *Digital McLuhan: A Guide to the Information Millennium*. Routledge, London, 1999.

16. McLuhan, M. “Notes on the Media as Art Forms,” in *Explorations* no. 2 (April 1954), pp.6-13; reprinted in McLuhan, M. *Marshall McLuhan Unbound*, Vol. I. Ed. by Eric McLuhan. Gingko Press, Corte Madera CA, 2005. No. 15.

17. McLuhan, M. *Understanding Media: The Extensions of Man*. 3rd printing. McGraw-Hill, New York, 1964.

18. McLuhan, M. “Casting My Perils Before Swains,” in G. E. Stearn (ed.). *McLuhan: Hot and Cool: a primer for the understanding of and a critical symposium with responses by McLuhan*. Dial, New York, 1967, p.xiii.

19. McLuhan, M. “McLuhan's Laws of the Media,” in *Technology and Culture* (January 1975), pp.74-78.

20. McLuhan, M. “The Laws of the Media,” in *Et cetera* vol. 34, no. 2 (June 1977), pp.173-79; reprinted in McLuhan, M. *Marshall McLuhan Unbound*, Vol. I. Ed. by E. McLuhan. Gingko Press, Corte Madera CA, 2005. No. 19.

21. McLuhan, M., and McLuhan, E. *Laws of Media: The New Science*. University of Toronto Press, Toronto, 1992.
22. Myers, D. *The Nature of Computer Games: Play As Semiosis*. Peter Lang Publishing, New York, 2003.
23. Myers, D. "hide: The aesthetics of group and solo play," in *Proceedings of DiGRA 2005 Conference: Changing Views: Worlds in Play* (Vancouver, British Columbia, June 2005), Digital Games Research Association. Available at <http://www.digra.org/dl/db/06276.04321.pdf>.
24. Nietzsche, F. *The Will to Power*. Trans. by Walter Kaufmann and R. J. Hollingdale. Ed. by Walter Kaufmann. Vintage, New York, 1968.
25. Pratchett, R., Harris, D., Taylor, A., and Woolard, A. *Gamers in the UK: Digital Play, Digital Lifestyles*. BBC, London, 2005. Available at http://crystaltips.typepad.com/wonderland/files/bbc_uk_games_research_2005.pdf.
26. Putnam, R. D., "Bowling Alone: America's Declining Social Capital," in *Journal of Democracy* vol. 6, no. 1 (January 1995), pp.65-78. Available at <http://xroads.virginia.edu/~HYPER/DETOC/assoc/bowling.html>.
27. Putnam, R. D. *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster, New York, 2000.
28. Raessens, J. "Computer games as participatory media culture," in J. Raessens and J. Goldstein (eds.). *Handbook of Computer Games Studies*. MIT Press, Cambridge MA, 2005, pp.373-88.
29. Rushe, D. "Life in the Unreal World," in *The Sunday Times* (10 December 2006). Available at: http://www.timesonline.co.uk/tol/life_and_style/article661299.ece.
30. Salen, K., and Zimmerman, E. *Rules of Play: Game Design Fundamentals*. MIT, Cambridge MA, 2004.
31. Sotamaa, O. "All The World's A Botfighter Stage: Notes on Location-based Multi-User Gaming," in *Proceedings of Computer Games and Digital Cultures Conference*, Frans Mäyrä (ed.) (Tampere: Tampere University Press, 2002), pp.35-44. Available at <http://www.digra.org/dl/db/05164.14477>.
32. Strate, L. *Echoes and Reflections: On Media Ecology as a Field of Study*. Hampton Press, Cresskill NJ, 2006.
33. Stroud, M. "Have Cell Phone, Will Shoot," in *Wired News* (8 February 2002). Available at: <http://www.wired.com/news/wireless/0,1382,50205,00.html>
34. Taylor, T. L. *Play Between Worlds: Exploring Online Game Culture*. MIT, Cambridge, MA, 2006.
35. United Kingdom Office for National Statistics. *Social Trends*. No. 30-36. ONS, London, 2000-2006.
36. Williams, D., Ducheneaut, N., Xiong, L., Zhang, Y., Yee, N., and Nickell, E. "From Tree House to Barracks: The Social Life of Guilds in World of Warcraft," in *Games and Culture* vol. 1, no. 4 (October 2006), pp.338-61. Available at <http://www.nickyee.com/pubs/Tree%20House%20to%20Barracks%202006.pdf>.
37. Yee, N. "MMORPG Hours vs. TV Hours," in *The Daedalus Project: The Psychology of MMORPGs*. Available at <http://www.nickyee.com/daedalus/archives/000891.php>