

The Reader as Author and the Ontological Divide: *Rome Total War*TM and the Semiotic Process

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The aim of this paper is to focus on some crucial problems concerning the understanding of the new cultural form called “computer games”. There are affinities between most computer games (at least the most popular ones) and the literary or cinematic text in that a story of some sort is involved in all of them. In the comparison between cinema texts and computer games there is even the shared modality of an audiovisual mode of representation.

However, there is a great deal of difference in the way the reader / viewer in literature and cinema and the player in computer games interacts with the respective text in question: modes of identification with characters, immersion in the fictional and game world, passive or more active degrees of interaction, etc. The question is whether semiotics as a viable methodology can assist in the explication of such textual relationships where the player (as reader of her text) assumes authorial characteristics and to what extent such activity affects the ontological status of player (as reader-cum-author) vis-a-vis the real / fictive gameworld. To limit my scope I elect to examine simulation and strategy games, also called “god-games”, which offer an omniscient third-person point of view and a flat grid-like gameworld; in particular I focus on a strategy, turn based, simulation game, *Rome Total War*TM, which offers an additional research parameter, that of History.

Which world is this? What is to be done in it? Which of my selves is to do it?
(Dick Higgins, *A Dialectic of Centuries*, 1978)

In the last twenty or so years, with the explosive growth of information technology and the expansion of digital media, computer games have established themselves as a dominant form of cultural expression that has changed the world of entertainment and leisure. Since the computer has gained central role in our “citadel” of entertainment, the living room, more people find themselves attracted to digital entertainment. The computer game industry has known exponential growth, to the point of challenging traditional cultural industries such

as those of television, cinema, and music;¹ nowadays it stands as an unquestionable rival to these traditional modes of entertainment.²

With the impressive growth of computer games as a new cultural form, computer game studies has been institutionalised, with the establishment of academic departments and research centers, international conferences and specialised journals dedicated to exploration, research and teaching about games and gaming.³ The semiotics of computer games is a relatively new discipline or perspective, partly because gaming has emerged as a cultural phenomenon quite recently, but also because computer games have not been taken up as a subject of serious study by semiotic circles.⁴ More active in this endeavor are Italian semioticians, especially the Italian Association of Semiotic Studies, which has devoted a special issue to the semiotics of computer games in the *E | C Journal* (2009). In their introduction, Compagnio and Coppock consider computer games to be apparently *de jure* an object of semiotic pertinence:

a hybrid, technologically mediated form of expression that both reflects, and motivates, many important tendencies in contemporary culture; in cinema, dance, music, art, literature and science, to name but a few. Its logics and practices are highly contagious and are infecting not only the more immediately *interactive* material and practical spheres of cultural meaning production, but also the more ephemeral, imaginary and experiential spheres of our everyday lives too. (5)

The same authors, nevertheless, wonder whether the apparent reluctance of semiotic studies to engage with this object of study resides in a fear that “the traditional model for semiotic analysis – the *text* – developed originally to interrogate and understand traditional literary aesthetic / artistic artefacts and other, more everyday forms of expression, is not *de facto* applicable to computer games?” (5).

To a certain extent, such a fear might be justified, as computer games form a category of texts that are markedly different not only from literary texts, but also from all kinds of (audio)visual texts (such as films, TV shows, advertisements, comic strips, cartoons and so on) that structural semiotics had taught us

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1. For more information see Keane, *CineTech*; King and Krzywinska, *ScreenPlay*; see also Kokonis, “Ψηφιακή ψυχαγωγία”.
 2. See Mattgriswold.com, “Videogames vs. Box-Office”; for the Global Video Game Industry sales for 2011 see the Gartner research in *The New York Times Bits Blog* (Adolph, <http://www.itu.int/ITU-T/techwatch>); for a comparison between the Video Game Industry and those of Cinema and other Entertainment forms see Kokonis “The Game vs. Cinema Industries in the Digital Era”.
 3. Espen Aarseth inaugurated the official beginning of computer game studies in the year 2001, by giving the title “Computer Games Studies, Year 1” to his article published in the e-journal *Game Studies.com*.
 4. Except for Dr. David Myers, distinguished professor in Mass Communication at Loyola University in New Orleans, an internationally recognised scholar of digital media and play studies. Having contributed widely with numerous publications, he is said to have researched videogames longer than anyone else.

to treat as texts. Consequently, a discussion of how computer games constitute a cultural form, and how meaning could be gleaned with the aid of semiotics, will inevitably involve fundamental questions about the nature of computer games as texts and whether computer games are narratives as all the other textual categories in cultural production and consumption are.

It has become apparent that there are two basic differences that set computer games apart from other cultural forms, as far as the notion of text is concerned: interaction and narrativity. Due to their digital character, computer games comprise multimedia texts, offering multiple channels of textual navigation: in addition to images, sounds and verbal text, which are traits that they share with cinema and TV, computer games are equipped with very intricate interfaces which provide a non-linear textual access by means of electronic links. In short, they are hypertexts,⁵ a fact which accounts for the high degree of interactivity with their users. As readers of computer game texts, the players are active not only in the sense of navigating through the text, but they actually shape the text themselves through their movements while navigating.

This specific characteristic, interactivity, establishes computer games as a totally different category of texts, which according to Compagnio and Coppock (5), distinguishes computer games as having their own “proprium”: they are based on a non-narrative component. This brings up another vexed question: Do computer games tell stories? Given the immense variety of game genres, there is a large number of games that seem to have very little or no affinity to narratives: abstract games like *Pac Man* or *Tetris* and the majority of the so-called arcade games, many games deriving from the traditional analogue board games like *Monopoly*, chess or checkers; puzzle games, many types of simulation of athletic or artistic activities such as racing or flight simulation games, as well as several role-playing games (RPG), including those played massively online (MMORPGs), have very little to do with narrative as encountered in the cinema or in literature.

On the other hand, the most popular and most expensive of them,⁶ that are designed and promoted by the industry as blockbusters, tend to have an obvious narrative dimension: distinct plots with emphasis on fast-paced action, greater character development, more spectacular presentation of the gameworld with 3D graphics and with the aid of special effects; in short these games try to become more “cinematic” than the latest movie blockbusters. The story element, which is one of the inherent characteristics of computer games, seems far more prominent in those games that appear as direct spin-offs of some epic cinema productions like the James Bond or the Harry Potter series of films, *The Lord of the Rings* trilogy, the *Star Wars* saga, and many others. Academic critics with a scholarly background in literary or cinema studies⁷ approach computer games

5. Landow, *Hypertext*; Aarseth, *Cybertext*.

6. To give an indication, only 5% of the 6000 games produced and circulated in the global market every year achieve commercial success (King and Krzywinska 8).

7. For example Geoff King and Tanya Krzywinska, as well as a number of critics contributing

study on the basis of their similarity with the narrative-based cinematic or literary texts, researching for instance the games' spectacular representation mode, the notion of movement, narrative space and time, character narrativity, animation techniques, etc. (King and Krzywinska).

However, as any ludologist⁸ will claim, in the actual playing of computer games what really matters is not the story, but the gaming experience itself: *gameplay*.⁹ This rather elusive term is used to denote aspects of the gaming experience, that is, how much fun or attractive a game is, how easily the player is immersed in it, the degree of its difficulty and the length of its playability. In most games, especially in competition games, the story elements form the backdrop¹⁰ or the setting for gameplay to occur, as the gamer's priority is to win the game; as Fuller and Jenkins put it, "Once immersed in playing, we don't really care whether we rescue Princess Toadstool or not" (60).

So far, most theoretical research in computer game studies has been carried out either from a ludologist or a narratological perspective, resulting in an almost ten-year long theoretical debate as to which of the two approaches is the most effective for computer game studies. I have argued elsewhere ("Ψηφιακή ψυχαγωγία") that a middle-ground approach could be adopted as the most preferred and effective methodology, by combining the insights of play and game theory as endorsed by the ludologists with the theoretical tenets of narratology, provided that some concessions are made from each theoretical camp: play and game theory could certainly benefit literary or film theory, since there are authors (in the general sense of fiction makers) who do play fictional games with their readers (in the general sense of the recipients of fiction; Hutchinson 65); aspects of narrative theory could certainly help ludology in researching and interrogating any narrative component of computer games, provided that computer game studies is not colonised as a sub-field of literary or cinema studies. In this paper I would like to take a step further by examining how this middle-ground methodology

with their essays to the collective volume *ScreenPlay: Cinema/videogames/interfaces*, edited by King and Krzywinska. Other prominent critics contributing to computer game studies from a narratologist / narrativist or media perspective are Mary Fuller, Henry Jenkins, Marsha Kinder, Janet H. Murray, Marie-Laure Ryan, Barry Atkins, Julian Kücklich, James Newman, Diana Carr, Andrew Burn, Stephen Keane, Gabriele Ferri, and Felipe Luis Teixeira.

8. *Ludologist*: from the Latin root *ludus*, meaning play controlled by rules. Notable ludologists in the field of computer games studies are Espen Aarseth, Gonzalvo Frasca, Jesper Juul, Markku Eskelinen, Chris Crawford, G. R. Loftus and E. F. Loftus. The term "ludologist" was first introduced in the 3rd International conference on Digital Art and Culture at Brown University (2001) referring to the three keynote speakers (Eskelinen, Juul and Frasca) and has been used since then to denote researchers in electronic/digital/computer games studies.
9. Newman enumerates five basic game characteristics: graphics, sound, interface, gameplay and story (*Videogames* 11).
10. Pointing out their role as mere textual convention, Myers calls them back-stories. He cites the dictionary definition of back-story as "[it] consists of 'a narrative providing a history or background context, esp. for a character or situation in a literary work, film, or dramatic series'". (dictionary.com online)

can be strengthened by figuring out how the semiotics of today can be best positioned in this combination of the ludology/narratology perspectives.

A new methodological approach for computer games study

Referring to the current notion we have of semiotics today as “a particular point of view or *perspective* that may be used to focus on, and to interrogate, contemporary cultural phenomena and trends,” Compagnio and Coppock (6) have opted for accepting a third, more pragmatic contemporary conception of semiotics, that emerged over time from two contrasting theoretical positions¹¹ that traditionally defined the discipline. This is the semiotic plane or level of analysis that seeks for “immanent,” hermeneutic traces or structures that can be discovered in the relationship between the text and the interpretative (and interactive) actions and practices of its users. It is precisely the same analytical sphere in which both ludologists and narratologists operate, although they adopt different approaches (and do not seem particularly keen on associating them with semiotics). This brand of semiotics (text vs. practice) is expected to be functional as a new kind of methodology required by the idiosyncratic nature of computer games texts.

As the aim of this paper, which professes to combine play and game theory (of ludology) with the theory of narrative fiction (of narratology), is to examine aspects of interactivity and narrativity in computer games, two of the *differentiae specificae* of computer games, gameplay and story, will be our focus in order to discuss relations between text and reader/user. Recent discussions on the nature and difference between analog and digital media, such as, for instance, Marie-Laure Ryan’s study (*Narrative Across Media*), help in overcoming the difficulty of treating computer games as texts of a different kind. Ryan has proposed a distinction between two categories of what a text can be: *being* a narrative and *having* narrativity. Computer games, based on digital technology and consequently displaying a higher degree of interactivity, may not be read as narratives in the sense that movies, TV shows, or novels are; however, their narrative dimension, even though subdued, allows us to treat them as having some degrees of narrativity, which is interesting in how some of the traditional theoretical views about the nature and the appeal of narratives are challenged.

11. These two contrasting semiotic positions are described by the writers as follows:

The first position sought to encompass the entire *field* of potentially meaningful phenomena, which were to be categorised in accordance with their specific granular traits as defined by a complex general theory of Semiotics. The risk here was to be unable to agree on uncontroversial delimitations within and between an apparently heterogeneous mass of cultural units with potentially unlimited meaning potential.

The second position aimed to develop a strictly formal analytical (or descriptive) *methodology*, independently of any of the more specific characteristics of the actual objects and other phenomena it was supposed to be applied to. The risk here was not to be able to provide sufficiently valid empirical justifications for the speculative results generated by application of this theoretical model in specific contexts. (Compagnio and Coppock 6)

Rome: Total War™

As a case study for testing the theoretical position of semiotics as “text and practice,” I elected to focus on a simulation game, *Rome: Total War™* (Activision/Sega/The Creative Assembly 2004), a game combining turn-based strategy and real-time military tactics.¹² I refrained from choosing a more “cinematic” or clearly narrative-based game such as *Max Payne* (Remedy/God Games 2001), or *Metal Gear Solid* (Konami 1998), that is a game with an obvious narrative plot, spectacular 3D graphics, many levels with cut scenes¹³ and interesting heroes/characters, precisely in order to explore issues of textuality (interactivity/narrativity) in a kind of game with a lesser degree of narrativity. Besides, *Rome Total War™* (henceforth referred to as *RTW*) is a top game in the category of strategy war games, highly acclaimed and awarded in the gaming community (*Gamespot*, *Gamespy*, *IGN*, *E3*),¹⁴ winner of the Best Strategy Game Award for 2004. With *RTW* the game’s developer, The Creative Assembly, came up with a hallmark achievement, combining strategy and simulation in one game. For unlike *Command and Conquer* (Electronic Arts 1999) which is played in real time but is not a strategy game, and unlike the *Sid Meier’s Civilization* series (Microprose 1989, 1996, Infogrames 2001, 2K Games 2005) which is a simulation strategy game but is not played in real time, *RTW* is both a strategy turn-based game and a military tactics real-time game. In his review of the game, Philip Morton explains the difference between strategy and military tactics:

strategy – The science and art of military command as applied to the overall planning and conduct of large-scale combat operations.

tactics – The military science that deals with securing objectives set by strategy, especially the technique of deploying and directing troops, ships, and aircraft in effective maneuvers against an enemy.

The third reason for choosing this game as my case study text has to do with my long-standing experience with playing *RTW* since 2004, a fact that I admittedly divulge with some reluctance lest my colleagues, all very serious academics in the School of English where I teach, begin treating me like someone wasting productive research time. However, for those who know a few things about

12. It is a typical strategy genre characterised by the 4x (eXplore, eXpand, eXploit, eXterminate).

13. Cut-scenes represent the strongest aspect of the narrative dimension in computer games and are considered to be part of the non-interactive aspect of game design, since they assign the player the role of a momentary detached observer as opposed to his/her more active role in the actual game playing. In short, they are audiovisual sequences or short movies, appearing in the beginning (as introductions to the back-story) and at the end of the game (victory movie), but also in many games they appear between “levels” to offer further “storytelling” information. More on cut-scenes in King and Krzywinska (11-12 and 23-24) and Newman (37, 71-72), especially his thorough discussion of cut-scenes as functional parts in computer game structure.

14. *Gamespot*, *Gamespy*, *IGN*, *E3* are electronic magazines or organizations specializing in the promotion, presentation, evaluation and categorization of game titles in the game industry.

games and gaming, a casual “reading” of a computer game as a “text” will not suffice for a productive critical analysis. Complex games, like *RTW*, are not consumed at a single sitting, and playing the game often requires endless hours to complete; besides, one needs to play the game many times in order to gain the necessary experience to become an adequate critic.



Figure 1. The game's logo.

Despite the initial feelings of unease at playing with virtual toy soldiers and conquering the world, the magical moment in the final clip of the game, with my avatar, an army general, walking through the hall of the Roman Senate and sitting on the throne with the word Victory flashing in capital letters above him, offered me the realisation of a radically different kind of experience: here was a text which, in the context of communication and media studies, required a far greater degree of ergodic¹⁵ interaction, as Aarseth calls it, involving actual embodied engagement with the text, in addition to the typical emotional and intellectual involvement that traditional media texts such as those of the novel, cinema or television require.

In comparison to other “first-person,” “shoot’em up” action games or “third-person” adventure games, that are popular because an interesting story is formed as a result of the playing activity, *RTW* is a game steeped in history. It is set in the historical period of Hellenistic and early Roman times (from 270 BC to 14 AD) during which time a simulation of the development of ancient Rome is represented: from its humble beginnings as an aspiring republic to its elevation into a potent and glorious empire with its conquest of the then known world. At the initial engagement with this game the player is offered the option of playing with one of three factions of Roman patricians, the House of Julii (red banners), the House of Brutii (green banners) and the House of Scipii (blue banners), whose spheres of influence and conquest interests extend towards the north-west, the east and the South of the Mediterranean respectively.

15. Ergodic, a term introduced by Aarseth (*Cybertext* 1) derived from the Greek *ergon* and *hodos*, meaning “work” and “path,” in order to identify the amount of effort needed to traverse a game, usually larger than the effort involved in reading a novel or watching a film.

In the early stages of the gameplay, the Roman factions develop gradually under the aegis of the Roman Senate. The Senate assigns them missions for the conquering of new territories and the expansion of the Roman Republic and supports them financially as a reward upon the successful completion of such tasks or operations. The faction of the Roman Senate, which does not expand beyond the boundaries of the capital city of Rome, encourages potential co-operation between the Roman factions as allies for the grandeur of Rome. Notable is the fact that *RTW* stands up to its claims of “historical authenticity,” as advertised in the rhetoric of “realism” and “simulation” in its promotion pamphlets. The political game between politicians and the military is quite evident in the interplay of power-seeking relationships among the factions and the Roman Senate. As a gamer controlling its avatar, in this case the generals and troops of your faction, you are given the opportunity by the game code to achieve some balance between your personal ambitions for getting more power and the dictates of the central governing body of the Senate. As you progress in the gameplay (whether as Julius, Brutus or Scipio) you must keep up appearances as a faithful *legatus* to the ideals of the Roman Republic, at least in the beginning, until you establish greater powers over your sibling factions. As you become more powerful, you gain the sympathy and popularity of the simple people, the plebeians, while you attract the envy and hatred of the other families who influence the senators against you. Eventually the Senate, showing complete distrust and a fear that you will abolish democracy and become an emperor, demands the suicide of your family’s leader; failing to comply means that they declare war against you. This will bring you into a predicament as you will have to face your previous allies in addition to the historical rival nations (primarily the Gauls, Britons, Germans and Spanish if you play as Julius, the Macedonians, Thracians, Dacians, Scythians, Pontii, Armenians, Parthians, Seleucids and the Greek Cities if you play as Brutus, and the Carthaginians, Numidians and Egyptians if you lead the Scipii). Such a degree of difficulty surely raises the ante in terms of antagonism and adds to the gameplay’s playability, revealing one more reason why *RTW* is a top game in its category.

Counterfactual history

However, after playing a few games with the Roman factions, the game opens up, offering you the chance to choose from among the other factions (mentioned above) which you can now lead. In this aspect it is very similar to *Close Combat II: A Bridge Too Far* (Microsoft 1996), which is a real-time strategic war-game, simulating a counterfactual historiography by “rewriting the History of the Second World War to the advantage of Nazi Germany” (Atkins 2). While the “what if?” hypothesis is a *sine qua non* for story foundation in setting the premise and further development of any fictional narrative, the exploration of the historical “what if?” that both *RTW* and *Close Combat* posit for counterfactual gameplay is as challenging as any of the contributions to Niall Ferguson’s edited collection of essays, *Virtual History: Alternatives and Counterfactuals*, which pose ques-

tions such as “What if there had been no American War of Independence? [...] What if Britain had stayed out of the First World War? What if Hitler had invaded Britain or had defeated the Soviet Union? What if the Russians had won the Cold War? What if Kennedy lived? What if there had been no Gorbachev?”¹⁶

Atkins remarks that “there [is] a tension inherent in this form of game between historical truth claim and fictional possibility,” wherein “fiction and history appear [...] to be caught in a complex relationship that needs teasing out” (3). *RTW*’s potential for countless rewritings of history against the historical record is a case in point: What if ... one of Alexander’s heirs to his vast Empire, the Ptolemies or the Seleucids, had actually beaten the invincible Roman armies and extended the Empire into the West beyond Rome? What if Cassander’s Macedonians, or the Federation of the feeble Greek Cities actually proved worthier in the field of battle and defeated the Romans, capturing Rome and then conquering the world of both the East and the West? What if like another Hannibal you could actually invade Italy, but unlike him you were never forced to stop *ante portas*, but instead crushed your immemorial enemies and consequently became the ruler of the entire ancient world? Even Julius Caesar’s glorious historical achievements pale before your fictional Julius’ conquest potential in this game; after defeating the Gauls and subduing the unruly German hordes, extending Roman rule up to the British isles, he was murdered, whereas your fictional Caesar dispenses with his rival factions (the Brutii and Scipii) and keeps conquering one after the other the great capitals of the ancient world, Carthage, Alexandria, Sidon, Antioch, Seleucia, Sousa, becoming a true Emperor.

Atkins makes a sound point by convincingly arguing for the fictional form that a number of computer games have, games that are more than games, as his book’s title page has it, but he is quick to note that “we are confronted with a form of narrative storytelling where the production of story is the end result of play,” since in a game “‘winning’ is everything” (7).

Before we attempt an assessment or evaluation of the narrative dimensions in *RTW*, it is imperative to consider the notion of interactivity: the kind of interaction that goes on between the text, as the computer programming code has laid it out for game playing, and a reader, that is the player who is bodily involved not merely in consuming but actually completing the text with his/her overall interpretative activity. For despite the trivial and repetitive routines in the individual turns of the game in building a civilization piece by piece, managing the economic and military infrastructure of individual cities, moving the troops from one location to another and fighting battles, the gamer in this kind of history simulation actually forms a trajectory of movement, signifying an entire career as a professional soldier, creating a story. The game’s code sets up the rules and introduces the general historical framework as a kind of grid within which the game will be played, but it is the player’s particular choices that determine the trajectory that the story will take and how the text, a history of the ancient world,

16. Excerpt cited from the dust jacket of Ferguson’s *Virtual History*.

will be shaped. Even if it is the same game you want to replay (choosing the same faction to play with as in the previous session), the outcome is going to be a different story, as your choices in the individual historical episodes and levels of the game are not going to be the same.



Figures 2 and 3. Realistic representations of warfare in game-engine produced scenes on the Battlefield Map.

Despite the near-obsession with questions of historical authenticity and “realism” that *RTW* displays (cf. Figures 2 and 3 above), there will still be a gap emerging out of a lack of correspondence with historical facts. In the variant of narrative history that you have constructed, your Roman armies will probably have followed a different trajectory in conquering, say, Asia Minor, Mesopotamia, Parthia and then Egypt, contrary to what may have been registered as historical fact in the annals of ancient history.

Interactivity

The role of interactivity, then, could not be stressed enough in bringing about a number of ramifications in the relationship between reader and text, in the notion of story formation and storytelling, in the notion of the separate kind of reality and the ontology of participants in the narrative situation of game, especially that of the reader. First of all, in most computer games there is an intricate interface, which provides signs of the game’s inherent programming and setting of rules (responsible for making games so much fun to play with in the first place) and offers a teaching program to the player, a kind of tutorial aiming to aid the individual in his/her navigation of the game text and enriching his/her gaming abilities. In this respect, games are like novels which train the reader’s intellect for critical thinking, and like cinema which makes the reader more intelligent by enhancing perception. But computer games are a rich art form, according to James Paul Gee, because their semiotic system of communication provides a greater degree of literacy than traditional art forms do. The computer game designer provides the player with just a number of shapes and objects and movements in the form of a top-down story, or back-story – which in itself is not very

significant in the game.¹⁷ But in interaction with the game's interface the gamer has to assign meaning to these shapes and things through the repetitive and trivial moves within the text and eventually hone his/her gaming skills to an expert level. Developing and refining these cognitive gaming skills is absolutely essential to a computer game player. By playing, the gamer is taking the risk of having to abandon the fictional game world, the "magic circle"¹⁸ of the game in which he/she is totally immersed. If he/she loses the game, if – in despair – the gamer comes across the unavoidable "Game Over!" message, he/she realises that this is a sign of rejection from the text. Computer games, then, as texts pose a high risk to their reader, something that the novel reader or the film spectator never has to face.

Whereas some ludologists¹⁹ would not admit the existence of story in computer games, or at least downgrade the narrative aspects as nothing more than "just uninteresting elements or gift wrappings" (Eskelinen 16), James Paul Gee claims that, in simulation strategy games particularly, there exist four different types of story. It is interesting to follow his line of thought, exploring the marriage between the text's game rules and individual practice or performance as a process of semiosis, not with a view to explain how literacy is gained as a result of a meaning generating process, as he does, but to get some insight into the nature of play itself.

The designer's story (or back-story)

First there is the *designer's story* (or back-story), which is formed by the game's code with its sets of rules, the story which provides the general spatio-temporal narrative context, a kind of grid within which the player will move and play. Naturally so, as no game is played in a complete vacuum. It is not important in itself and it is nowhere much "like a Henry James story or a profound movie story" (Gee 3'38"). In *RTW* it is the historical setting which situates the game of empire-building nations. Praising *RTW*'s excellent graphics, the reviewer of *HeavenGames.com* explains how the designer's story constitutes an invitation to an epic and romanticised historical experience, in the following manner:

17. Concerning the usefulness or not of back-stories in computer games Myers's position is cited below:

While narratives and back-stories inevitably result from natural human semiosis, back-stories neither motivate nor confine the semiotic process. Thus, back-stories function very differently for computer game designers and for computer game players. For designers, back-stories serve a framing function, making sure all game elements are implemented within a consistent, conventional, and (successfully) commercial context. For individual players, however, back-stories inhibit the more *selfish* semiotic processes that occur during play. (*Play Redux* 87)

18. This is a term first introduced by Huizinga.

19. For instance Juul in one of his early papers ("A clash between game and narrative") – later he revised his position; Rouse, Crawford (*The Art of Computer Game Design*) and Loftus and Loftus.

Rome. Marble temples clad in glimmering gold and silver, reflecting light from crimson capes donned by marching Legionnaires; those Legionnaires clashing with barbarian armies, conquering new lands. Patrician families lounging in luxurious mansions in the rolling countryside of said lands: The lands of the Empire stretching from the misty frontier of Britain to the scorching desert of the Middle East. Such images are fabricated in minds by that one word, that one Empire. You can lead your civilization to such an Empire in *Rome: Total War*. (<http://www.heavengames.com/reviews/rtw/index.shtml>)

Unlike other strategy games based on a linear, story-driven campaign mode, *RTW's* game play is more abstract, providing just a map of the world around the Mediterranean basin, where the civilization of nine different nations will be built as the game progresses (17 factions are available if you mod the game), but the world that will take shape at the end of the game will be different, depending on which faction will prevail as an imperial nation. If any one of the three Roman factions prevails, the world map picture will look pretty much like the established historical view we have of the world when Rome reached its peak as an Empire, (though still not completely accurate historically). But if any of the other factions proves victorious in the end, simulating the kind of counterfactual historiography this game provides as an option, then we are going to have a totally different picture of the world map.



Figure 4. The Strategy map. The main image shows a map of the Greek provinces in the process of being conquered by Carthaginians (The cities of Sparta, Corinth and Athens have already fallen.) On the lower left part of the screenshot, the World Map with its 103 provinces depicts a totally different version of History, as the Carthaginians (with white banner code) have already conquered Rome and the West and are expanding to conquer the rest of the ancient world.

Places and spaces

If the experience of playing *RTW* anywhere is seen to bear the characteristics of a narrative, then this is the story of the map itself. Friedman has pointed out that “the point of view” in simulation god-games provides “a detached, overhead, fixed perspective” that results in a narrative being centered around and about the map itself: The map is not merely the environment of the story: it’s the hero of the story” (5). Friedman has taken the concept of narrative as spatial story from Fuller and Jenkins, who have argued that videogame narratives are not structured according to a plot or even through the development of character, as in traditional or classical narrative forms; rather the narrative in game-texts is similar to the New World travelogues which develop through the transformation and mastery of geographic space, a colonisation of space (66). Actually they are based on Michel de Certeau’s distinction between place and space:

For de Certeau ... narrative involves the transformation of place into space (117-118). Places only exist in the abstract, as potential sites of narrative action, as locations that have not yet been colonized. Places constitute a “stability” which must be disrupted in order for stories to unfold.... Spaces, on the other hand, are places that have been acted upon, explored, colonized. Spaces become the locations of narrative events. (Fuller and Jenkins 66; also qtd. in Newman 113)

If we check the miniature map of the world in Figure 4 (above), we will notice that the colonised space of the provinces conquered by the Carthaginians has been designated through the color code (white) of this faction’s banners. In the beginning of the gameplay, the map shows only the provinces of the player’s faction with his/her banner’s color, whereas the rest of the provinces (places still unexplored, not acted upon) remain shaded. From the moment that a player’s diplomats, spies or assassins, or military troops travel through the “unknown” territories, the provinces change colors, letting the player know which faction those spaces are controlled by.

Characteristics of the game

Viewed in terms of play and game theory the designer’s story establishes the separate reality of the game text, with its own space and time boundaries (the nation states around the Mediterranean in Hellenistic and early Roman times). Making use of Caillois’ four categories of play, that is, *agôn*, *mimicry*, *alea* and *ilinx*, the element of *agôn*, that is, the competitive character, is the quintessential trait in *RTW*. Competition is strong as there are many rivals in the game (minimum nine factions and maximum 17, even more if we count the Roman Senate and the Rebels) but in the standard historical mode, the antagonism is enhanced since the Roman factions have to compete against each other as well. Since *RTW* is a turn-based strategy, in essence the gamer competes against the computer’s CPU. On the Campaign Map the competition between the CPU and the player amounts to a matter of who is going to excel as manager cum politician, diplomat

and governor. The player must make the best strategic decisions for the optimum organisation of his cities (economic and military infrastructures which will assure the welfare of the people and the fighting potential of his armies) in anticipation of similar strategies of his/her main faction opponent, actually governed by the game's artificial intelligence (AI). At the same time the player must watch closely the politics among the other factions (political alliances forming power blocs, which factions are at war with others) in order to control relations with neutral factions through special agents (diplomats, spies, assassins). In terms of long-term strategy planning, the player as governor-general should opt for choices of the best territories to invade (e.g. capturing rich cities whose high taxes will fill the national treasury) before the opponent does.

On the Battle Map level, the game's AI is not as challenging as in the Strategy Map mode. Reinforcements, coming to aid in the actual battlefield are controlled by the AI and make foolhardy attacks; auto-battles in most cases turn out worse than anticipated, and generals of the opposing forces rarely show any innovating tactics in their fighting. Still, there is quite an amount of unforeseen factors which may be decisive in winning or losing a battle, which requires of a player to show true military genius in order to come out victorious.

Being a simulation game *RTW* also partakes of another of Caillois' game categories, *mimicry* or role playing, a game trait that has more affinities with narrativity. A conception of the player in *RTW* as just an armchair general clicking the mouse and punching keys on the keyboard could not be more misleading. For one has to believe in their assumed role as Julius, Brutus, or Scipio, as Ptolemy, Hannibal, or Vercingetorix. In fact one has to be immersed in the virtual reality of the ancient historical world, to get "in character" or into the "spirit" of the game, in order to enjoy the excitement that this game's gameplay offers. The lengthy cut-scene at the very beginning of each game, that is, an independent short movie with a voice-over narrator serving as an introduction to the "spirit" of the game, certainly helps the immersion of the player in the gameplay. However, as there are no other overt narrative passages in the game, and despite the schematic and abstract representation of events and characters on the map, immersion is still achieved through the reader's/player's cognitive and mental and interpretative activities. Therefore, *RTW* invites a player's immersion not in the game world, but in the gameplay itself.

It is to the credit of the game's designers that the element of chance (*alea*) is also given a limited, though functional role, adding to the gameplay's playability. The element of chance is most prominent in the options offered by the game to resolve battles. One way is to allow the auto-battle mode where the computer resolves who the winner is; the other allows the player to fight the battle in real-time play. In addition, there are several chance events that may affect game play: weather change, natural catastrophes, pirates appearing out of nowhere, city rebellions. References to the aleatory element are made by means of some epigrams (signed by the wise men of antiquity) appearing in cards before and after a battle, or every time the Strategic Map is rebooted: "War, as the saying

goes, is full of false alarms”– Aristotle; “Adversity reveals the genius of a general; good fortune conceals it” – Horace. These epigrams constitute an elegant stylistic touch to the historical drama of the gameplay, echoing the voice of the chorus in ancient high drama.

The player’s story

The second type of story these computer games offer, according to Gee, is the player’s personal trajectory through the text story. When the playing begins, story per se is the last thing a gamer is interested in. What matters is playing, the advancement of the game through the repetitive, mechanical, even trivial movements of the gamer, during which he/she assigns story-elements to shapes or combinations of shapes, and movements the game’s artificial intelligence program provides. In *RTW*, for instance, cities are the economic, political and military centers in each province; therefore, when an enemy city falls after a successful siege, the color of that province on the Strategy Map changes to the color of your nation’s banners, signifying that you have conquered another territory. Additional signs in the streamlined user interface show which buildings have been damaged and need repair, and how many soldiers remain alive and need retraining. In this way you progress in the campaign, fighting more battles, building captured cities, adding new provinces, making stronger armies and being rewarded with feelings of great accomplishments as you witness the borders of your faction expand to the size of an empire. This story is unique, as it is the result of your own personal trajectory of movements on the world map. Another player will probably make different strategic choices and the outcome will be a different story.

However, what is important from a narratological point of view is that such games allow the player to determine the course of narrative events, thus shaping the game text by means of his/her narrative moves. This is the reason why computer games are so different from novels and movies with their “beautiful, top-down, architectural stories” (Gee 4’54”). To make the comparison with books and films, the equivalent of *RTW* in fictional storytelling would be historical novels such as those by Steven Pressfield (*The Gates of Fire* 2001, which tells the story of Leonidas at Thermopylae, or the *Tides of War* which is the life story of Alcibiades and the Peloponnesian War), or even Michael Curtis Ford’s novel (*The Ten Thousand* 2002, a retelling of Xenophon’s *Kyrou Anabasis*), or films like Ridley Scott’s *Gladiator* (2000) or Oliver Stone’s *Alexander* (2004). But whereas the story in such historical narratives is conceived as fixed by the author and the text as an aesthetic object is subject to no change whatsoever, a *fait accompli*, the *RTW* top-down designer story is nothing but a loose narratorial grid, an “interactive matrix”²⁰

20. “The matrix is an overabundant semiotic agglomerate existing before the formation of any single game-text and containing all the semantic, narrative, figurative and strategic resources that will be actualised during the ludic activity. It is a complex semiotic object comprising different functions and different instances, such as victory conditions, interfaces, links or semantic, figurative, strategic and values-related repertoires (Ferri 468).

according to Gabriele Ferri, allowing for the kind of “procedural authorship” suggested by Janet Murray, whereby the reader of the text-game assumes some authorial properties. At a minimum, the decision to start a game or not signifies the existence of the game-text itself; if you don’t play at all, the game will remain in the condition of the interactive matrix, a potential text. Furthermore the game-text’s survival depends upon the player’s gaming skills (if you play it correctly) to bring it to fruition. This oddity certainly posits a challenge to traditional theories of narrative fiction, where authors and readers have been established as having distinct roles as producers and recipients of the narrative text respectively. It also raises further questions about the ontology of authors and readers as participants in the fictional game world, an issue we will have to address shortly.

The player’s career

The third type of story, as suggested by Gee, is the gamer’s career which is gradually built through his/her interaction with the game. For unlike the casual reader of fiction, who is most unlikely to return to the same text for additional readings, a gamer will play the same game many times. Apart from the gaming skills which will normally be acquired from the first contact with the game text (right-click the mouse, select, scroll down, punch that key, etc.), a player will gain professional expertise as a result of the game play itself. In *RTW* one learns to become a manager of cities, building an entire virtual civilization, as well as to become a military expert, without having any prior knowledge of such skills. *RTW* addresses itself to the Empirical Reader, rather than Eco’s Model Reader, although some implicitly specific encyclopedic knowledge of ancient history is presupposed by the game. But basically, instructions on how to improve performance into competence are inscribed in the program of the game’s system. For instance, if you play with an eastern faction like the Parthians, the game will offer you the possibility to start building caravan paths instead of the standard Roman highways, which is the cultural norm. When I was a novice in this game, I tried the option the game offers for some counterfactual historiography by choosing the Carthaginians as my faction against the Romans. I pretty soon discovered that Carthage’s Iberian infantry and Round Shield cavalry were no match for the Roman Hastati and Principes, let alone the invincible Legionnaires. So I had to rely on strategy and diplomacy to postpone confrontation with the Romans as far into the game as possible, in order to buy time for the production of some stronger military units, such as war elephants. Even then I had to be extra careful with my decisions on military tactics in the battlefield, if I wanted to avoid defeat.

The player has to cooperate with his troops and the captains and general who command them, because it is they who have the professional expertise to do the fighting and to win the battle, as long as he/she makes the right choices at the right moments. Gradually, through trial and error, playing performance is improved by learning from the professional know-how of the avatars how to be effective as a soldier and how to command an army; in short, practice with the game-text improves individual reader/user performance and gradually brings one’s competence to an expert level.

Producing histories and making worlds

Strategic games like *Civilization*, *Rise of the Nations* or *RTW* add a fourth story to the game-text, by creating histories of alternative worlds. Following the trajectory of the game from its early stages, where the player starts building a civilization, controlling buildings and armies through the end, where the game-text is brought to completion, one can see a brand new world formed. *RTW*, in particular, offers up to 17 different versions of historical reality. But whether the objective of the playing activity is a rewriting of history in this manner, or the creation of counterfactual history, it should be pointed out that such feats are not accomplished by the player as historian, but as an almighty God. For the objective and omniscient perspective that the game-text-as-map affords the player, in addition to the interactive matrix of the game, which allows the player the kind of procedural authorship mentioned earlier in progressively building an empire step by step, bring to mind the oft quoted romantic notion in fiction theory of the author as a powerful, authoritative and omnipotent god, busy at world making and unmaking.

This notion of the computer game reader/user as an author, especially a god-like one, poses some challenging questions regarding the ontology of authors and readers in their relation with the fictional text. It has been established in theories of narrative fiction (usually placed within a communication system framework) that authors and readers are conceived of as entities separate from and outside the fictional text. Narratology poses the notion of narrators and narratees, as fictional entities inside the text, as being representatives or delegates of the real-life author and the actual reader who exist outside the text. Crossing over from one ontological domain (the real-life world) to another (the reality of the made-up, fictional world) is out of the question, due to the ontological divide separating realities of a different order.

Only in playful metafiction is there a breach of the ontological divide, just for the sake of teasing out such questions of an ontological nature, because by definition metafiction is the kind of fiction writing that apart from telling stories, also calls attention to the nature of the text itself (Waugh 2). In making the distinction between modernist and postmodernist writing McHale claims that, whereas modernist texts animate strategies that foreground epistemological or cognitive issues, “the dominant of postmodernist fiction is ontological. That is, postmodernist fiction deploys strategies which engage and foreground [post-cognitive] questions: ‘Which world is this? What is to be done in it? Which of my selves is to do it?’” (10). Hence, metafictional texts, those that are part of postmodernism, systematically pose questions about their own mode of existence, or about the mode of existence of the world(s) they project.

We could agree with Atkins’ position that computer games, as a form of contemporary cultural expression “might be firmly placed within the postmodernist camp,” and that as a kind of “postmodern fictional form of representation” computer games evince most of the key-postmodernist traits, e.g.: an “anti-elitist

(popular, democratic, even demotic)” form, where more emphasis is laid on play over purpose, on (gamer’s) chance over (authorial) design, on a “dispersal” rather than a “centering” kind of discourse; in short, they comprise what Barthes has called “scriptable” texts (privileging the reader), rather than “lisible” (readable, privileging the author) (13-14). I would go even further and claim that the affinity of computer game-texts with postmodernist playful metafiction can be summed up in the authorial ludic activity of the latter, not that of playing with storytelling alone, but with fiction itself.

Tempting as it is to have resort to postmodern theories of text in order to resolve the ontological paradox, we must proceed with caution. Existing theories appear inadequate when faced with a play situation in which the player as reader, from an outside position, deciphers the signs of the game-text to reach an interpretation (as happens in fiction), but at the same time has a role as an *actant*²¹ within the text, shaping with his actions the very text that he reads. In the extensive analysis of the game-text there may have been revealed four different types of stories associated with gaming, yet we will have to agree with the ludologists’ position that story is not what the gamer is after in computer games: one does not play in order to read a story, one plays to win the game.

Perhaps we should start looking at the difference between works of fiction and computer games, a difference deriving from the hypertextual character of game-texts and their interactive interfaces, elements related to the digital technology on which games are based. With respect to the ontology issue at hand, a media-based approach by narratologist Marie-Laure Ryan, who has studied the impact of digital technology on analogical storytelling media, may be illuminating. Ryan proposes four categories of interactivity with regard to the active participation of the user of digital media (which include computer games), depending on whether that participation is interior or exterior, as well as whether it is exploratory or ontological. These categories can be combined in pairs to accommodate the great variety of computer game genres. As far as *RTW* is concerned, two combinations of these pairs are applicable. In the singleplay campaign mode of the game, interactivity as experienced in the turn-based Strategic Map would be characterised as exterior and ontological. Exterior, because the omniscient and objective perspective keeps the player detached from the virtual (and fictional) game-world; in this case the player is conceived as a kind of god controlling the fictional world, or has the impression of him/herself navigating in a data base. Ontological, in the sense that the player’s decisions at each turn affect the formation of the game-text and by extension shape the course of history. In the real-time battle scenes the player’s participation is interior and ontological. Interior, because the point of view may vary from the vantage and objective perspective from above, to the soldier’s eye level, thanks to the zooming in and out or the panoramic panning of the computer engine’s volatile camera. The player’s participation in the battle scenes is also ontological, since he can direct his troops

21. Actant, not in the theoretical Greimasian sense, but literally.

like a general, ordering specific troop formations, selecting military tactics, and thus affecting the battle outcome.

Although impressive strides have been made in new media theories, with the work of Bolter and Grusin as well as that of Manovich, perhaps it is too early in the age of electronics to have fully explored the impact of digital technologies on life and culture. According to the history of media technologies, the side effects of a medium's technology create a bigger impact than the new invention itself. For instance, the invention of the alphabet as a new medium may have revolutionised verbal language, but it was abstraction, the side effect of the alphabet technology, that was responsible for the birth of practically all the arts and sciences at about the same time. The invention of typography revolutionised writing as a recording technology, but its side effects, mass production, linearity and rationality, are thought to be responsible for the creation of the middle class, the Enlightenment and rationalism in Western culture.

In place of a conclusion

All of the above discussion on the nature of the computer game text which sought to gain some insight from the current perspectives of ludology and narratology leads to an unavoidable conclusion: we have to study computer games for what they really are. Aarseth's early plea to let computer game studies develop as an autonomous research field has its merits. Drawing ideas and exploiting methodological tools from related disciplines may have its advantages, but research on computer games should not lose sight of the specificity of the medium. Although I seemed to rely heavily on the admittedly heavier theoretical arsenal of narratology, my methodology was geared towards the specifics of computer games, trying to explore what makes them a different form of fictional representation. For all the fuss made about the different types of stories that would describe this particular game genre, god-games, eventually it became clear that interactivity, what exactly happens in the interaction of player and game-text, is the games' key characteristic. On a purely pragmatic level, the player is confronted with signs which need interpretation and those lead to further signs which expand towards an ongoing exchange of meaning, the Peircian spiralling process of semiosis. In this semiotic chain of meanings, signs become both the result of interpretation and the ground for action, therefore interpretation and action form a "closely co-ordinated relationship with one another" (Compagnio and Coppock 8).

In the case study text of *RTW* this escalation of meaning-generating was implicitly suggested, as from the shapes, colors and movements in the designer's story, the player assigns narrative meaning to objects and other existents on which further action is based, culminating in a complex interpretative network until the final formation of the game world and meaning-making. Therefore, a semiotic of computer games focusing on the interactive relation between the game-text and the player's interpretative and actual gaming practice seems to be a sound methodological approach.

Since computer games are a new cultural form, perhaps we should imitate what the Formalist school did to explore “literariness” in literary studies: apply more scrutiny to a formal study of computer games, as David Myers does, aiming at a more accurate definition of the essence of play which is at the heart of computer games. For if we want to understand this new popular and cultural form, we should direct research to what makes playing games such an exciting, even addictive experience. Myers has published extensively on the nature of computer games and in his latest book, *Play Redux*, he has formulated a rigorous argument on the aesthetics and the form of computer games, an approach that is informed by semiotic thought. If I understand his conception of play right, it seems to be very close to that of the philosopher Eugen Fink’s: “Play is a basic existential phenomenon, just as primordial and autonomous as death, love, work, or the struggle for power, but it is not bound by these phenomena in a common ultimate purpose. Play, so to speak, confronts them all – it absorbs them by representing them” (22). Myers notes that game designers structure games patterned on man’s instinctual tendency toward play. Unlike “poetic language” whose difference is made clear by reference to common language, computer games develop an anti-aesthetic, since the play of games refers to no other object but itself. Given the most strictly rule-governed game, man will find a way to break the rules and strive towards free play, Caillois’ *paidea*. Bernard Suits, who has provided the best definition of game (“Playing a game is the voluntary attempt to overcome unnecessary obstacles,” 41) implicitly suggests also the human need for free play. If we look again at *RTW*, we can testify that it is by its design a good game, because it offers an escalation of unnecessary obstacles. After the initial challenge of playing a rather straight history of Roman expansion, the game unlocks the other factions, offering the extra challenge of counterfactual history. The player who has moved well past the novice stage at this point will mod the game to play with all 17 factions. At the expert level he/she is more likely to discover in the game’s blog new exciting strategies, like Sassenach’s “Wanderlust: The Art of Mass Migration,” which suggests imposing your own rules against the *ludus* of the game: for instance, to play against the rule that says the Carthaginians ought to first confront the Roman Scipii. Well, the new strategy would be to get all your troops aboard ships and migrate to a different place, say Egypt. So early in the game it will probably be easy to conquer it. Having captured the rich Egyptian cities, most of Mesopotamia and Asia Minor will be under your rule, and you will grow powerful before the Romans do. Victory condition will be guaranteed in this way. Thus, *RTW* as a game of “recursive” and “recontextualizing” properties in fact develops a meta-commentary on history, as the term has been deconstructed by Hayden White. A proper definition of the game, then, on the basis of the present discussion could be: *RTW* is a semiotic (and interactive) machine for producing meta-histories.

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Works Cited

- Aarseth, Espen J. "Computer Game Studies, Year One". *Game Studies* 1 (July 2001). Web. <http://www.gamestudies.org/0101/editorial.html>.
- . *Cybertext: Perspectives on Ergodic Literature*. Baltimore: John Hopkins University Press, 1997. Print.
- Adolph, Martin. "Trends in Video Games and Gaming". *ITU-T Technology Watch Report*. (September 2001): 17. Web. http://www.itu.int/dms_pub/itu-t/oth/23/01/T23010000140002PDFE.pdf
- Atkins, Barry. *More than a Game: The Computer Game as Fictional Form*. Manchester and New York: Manchester University Press, 2003. Print.
- Barthes, Roland. *Image, Music, Text*. Trans. Stephen Heath. New York: Hill and Wang, 1977. Print.
- Bolter, D. J. and R. Grusin. *Remediation: Understanding New Media*. Cambridge, MA: MIT, 2000. Print.
- Caillois, Roger. *Man, Play and Games*. Trans. Meyer Barash. New York: The Free Press, 1961. Print.
- Carr, Diane et al., eds. *Computer Games: Text, Narrative and Play*. Cambridge: Polity Press, 2006. Print.
- Compagnio, Dario and Patrick Coppock. "Introduction". *Computer Games: Between Text and Practice. E|C Journal* (Serie Speciale). Associazione di Studi Semiotica. Anno III, nn 5 (2009): 5-11. Web. http://www.ec-aiss.it/monografici/5_computer_games.php
- Crawford, Chris. *The Art of Computer Game Design*. 1984. Web. <http://www.vancouver.wsu.edu/fac/peapody/game-book/Coverpage.html>
- . "Barrels o' fun". *Interactive Entertainment Design* 8 n. 3 (1995). Web. <http://www.erasmatazz.com/Library.html>
- de Certeau, Michel. *Heterologies: Discourse on the Other*. Trans. Brian Massoumi. Minneapolis, MN: University of Minnesota Press, 1984. Print.
- . *The Practice of Everyday Life*. Berkeley, CA: University of California Press, 1994. Print.
- Eco, Umberto. *The Role of the Reader*. Bloomington, IN: Indiana University Press, 1979. Print.
- Eskelinen, Markku. "From Markku Eskelinen's Online Response". *First Person: New Media as Story, Performance, and Game*. Ed. N. Wardrip-Fruin and P. Harrigan. Cambridge, MA: MIT Press, 2004. 120-121. Print.
- . "The Gaming Situation". *Game Studies* 1, 2001. Web. <http://www.gamestudies.org/>
- Eskelinen, Markku and R. Tronstad. "Video games and configurative performances". *The Video Game Theory Reader*. Ed. M. J. P. Wolf and B. Perron. London: Routledge, 2003. 195-220. Print.
- Ferguson, Niall, ed. *Virtual History: Alternatives and Counterfactuals*. London: Basic Books, 1997. Print.
- Ferri, Gabriele. "Narrating Machines and Interactive Matrices: A Semiotic Common Ground for Game Studies". *Situated Play*. Proceedings of DIGRA conference, 2007: 466-473. Web. <http://unibo.academia.edu/GabrieleFerri/Papers>
- Fink, Eugen. "The oasis of happiness: Towards an ontology of play". *Yale French Studies* 41 (1968): 19-30. Web.

- Frasca, Gonzalo. "Ludologists Love Stories Too; Notes from a Debate That Never Took Place". Paper presented at the Level Up: Digital Games Research Conference, Utrecht, 2003.
- . "Ludology Meets Narratology: Similitude and Differences between (Video) Games and Narrative". 1999. Web. <http://www.jacaranda.org/frasca/ludology.htm>
- Friedman, Ted. *Civilization and Its Discontents: Simulation, Subjectivity and Space*. Web. http://www.game-research.com/art_civilization.asp
- Fuller, Mary and Henry Jenkins. "Nintendo and New World Travel Writing: A Dialogue". *Cybersociety: Computer Mediated Communication and Community*. Ed. Steven Jones. Thousand Oaks: Sage, 1995. 57-72. Print.
- Gee, Paul James. "Part 3: Games as Literacy". A lecture entitled "A Productive Approach to Video Games, Learning, and School" delivered at the Centre for Educational Media, Monash University, Melbourne, Saturday 19 August, 2006. Web. http://www.youtube.com/watch?v=_2gpuD__sro&feature=relmfu
- Huizinga, Johan. *Homo Ludens: A Study of the Play Element in Culture*. Trans. R. C. F. Hull. New York: Harper and Row, 1970. Print.
- Hutchinson, Peter. *Games Authors Play*. London and New York: Methuen, 1983. Print.
- Jenkins, Henry. "The Cultural Logic of Convergence". *International Journal of Cultural Studies*, 7, n. 1 (2004): 33-43. Print.
- Juul, Jesper. "A clash between game and narrative". Paper presented at the Digital Arts and Culture Conference, Bergen, November 1998.
- . "Games telling stories? A brief note on games and narratives". *Game Studies* 1 (2001). Web. <http://www.cmc.uib.no/gamestudies.org/juul-gts/>
- . "What computers can and can't do". Paper presented at the Digital Arts and Culture Conference, Bergen, August 2000. Web. <http://www.jesperjuul.dk/text/WCGCACD.html>
- Keane, Stephen. *CineTech: Film, Convergence and New Media*. London: McMillan, Palgrave, 2007. Print.
- Kinder, Marsha. *Playing with Power in Movies, Television, and Video Games: From Muppet Babies to Teenage Ninja Turtles*. Berkeley, Los Angeles and London: University of California Press, 1991. Print.
- King, Geoff and Tanya Krzywinska, eds. *ScreenPlay: Cinema / Videogames / Interfaces*. London and New York: Wallflower Press, 2002. Print.
- Kokonis, Michalis. "The Game vs. Cinema Industries in the Digital Era: Tactics for Growth/Survival on the Cultural Scene and Prospects for the Future". *European Network for Cinema and Media Studies*. Web. www.necs-initiative.org. 2012.
- . "Ψηφιακή ψυχαγωγία: Παιχνίδια υπολογιστών και βιντεοπαιχνίδια" ["Digital Entertainment: Computer and Video Games"].
- . *Ψηφιακά μέσα: Ο πολιτισμός του ήχου και του θεάματος* [*Digital Media: The Culture of Sound and Spectacle*]. Ed. Michalis Kokonis, Philemon Bantimaroudis and Grigoris Paschalidis. Athens: Kritiki Publications, 2010. 339-399. Print.
- Kücklich, Julian. "Perspectives of Computer Game Philology". *Game Studies* 3 n. 1 (2003): np. Web. <http://www/gamestudies.org>
- Landow, G. *Hypertext: The Convergence of Contemporary Theory and Technology*. Baltimore, MD. and London: John Hopkins University Press, 1991. Print.

- Loftus, G. R. and E. F. Loftus. *Mind at Play: The Psychology of Video Games*. New York: Basic Books, 1983. Print.
- Manovich, Lev. *The Language of New Media*. Cambridge, MA: MIT, 2001. Print.
- Mattgriswold. Com. "Videogames vs. Box-Office". *IMDB* 2008, March 24, np. Web. <http://www.mattgriswold.com/post/29758265/videogames-vs-box-office-gross-sales->
- McHale, Brian. *Postmodernist Fiction*. London and New York: Methuen, 1987. Print.
- Morton, Philip. "Review of *Rome Total War*". *Thunderbolt: Reviews*. October 11, 2004. Web. <http://www.thunderboltgames.com/review/rome-total-war>
- Murray, Janet H. *Hamlet on the Holodeck: The Future of Narrative on Cyberspace*. Cambridge, MA: MIT Press, 1997. Print.
- Myers, David. *The Nature of Computer Games: Play as Semiosis*. Peter Lang series (Digital Formations), 2003. Print.
- . *Play Redux: The Form of Computer Games*. Ann Arbor: The University of Chicago Press and the University of Michigan Library, 2010. Available on line at <http://fileshare3090.depositfiles.com/auth-13534004320bbc8ac44ec372ce9238eb-46.177.56.90-669299696-62341957-guest/FS309-6/0472050923PlayRedux.rar>
- Newman, James. *Videogames*. London and New York: Routledge, 2004. Print.
- Peirce, C. S. *Collected Papers*. Cambridge, MA: Harvard University Press, 1931-1958. Print.
- Rome: Total War*™, Gold Edition. Activision/Sega, The Creative Assembly, 2004.
- "*Rome: Total War* Review". *HeavenGames: Building Online Communities for Games since 1997*. 2004. Web. <http://www.heavengames.com/reviews/rtw/index.shtml>
- Rouse, Richard. *Game Design: Theory and Practice*. Plano, Texas: Word-ware Publishing, 2001. Print.
- Ryan, Marie-Laure. "Beyond myth and metaphor – the case of narrative in digital media". *Game Studies* 1 (2001). Web.
- . *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore and London: John Hopkins University Press, 2003. Print.
- . ed. *Narrative across Media: The Languages of Storytelling*. Lincoln and London: University of Nebraska Press, 2004. Print.
- Suits, Bernard. *The Grasshopper: Games, Life and Utopia*. Toronto: University of Toronto Press, 1978. Print.
- Teixeira, Felipe Luis B. "(Digital) Game Criticism and New Media: Prolegomena to the Ludic (Cyber) Simulations". Proceedings of the VI SBGames Brazilian Symposium on Computer Games and Digital Entertainment, Sao Leopoldo, Brazil, 7-9 November 2007. Web.
- Waugh, Patricia. *Metafiction: The Theory and Practice of Self-Conscious Fiction*. London: Methuen, 1984. Print.
- White, Hayden. *Metahistory: The Historical Imagination in Nineteenth-Century Europe*. Baltimore, MD.: John Hopkins University Press, 1973. Print.