4x Gamer as Myth: Understanding through Player Mythologies

Johnathan Harrington
University of Malta
Msida, MSD 2080
00 356 79010892
johnathan.harrington@gmail.com

ABSTRACT
In this paper, we shall argue that games, being textual systems, can be understood semiotically - signs, or units, are being constantly renegotiated within the game due to their ergodicity. However, the mythologies outside of them remain, leading to a potential discrepancy between what *is* and what *is understood*. An understanding of player mythologies can, on one hand, help us formulate a better systemic classification of these interactions, while on the other hand, help us escape the restrictions the mythologies they belong in pose.

KEYWORDS
4x, games, mythologies, semiotics, Barthes, myth, remediation.

INTRODUCTION
In this paper, we shall first start by exploring games as textual systems, through an exploration of early works in game studies specifically, with authors such as Espen Aarseth and Ian Bogost. Having explicated upon these textual systems, we shall then aim to explore them using Barthesian scholarship. First we shall explore the textual system itself through its semiological elements. However, moving away from solely the system, we shall then delve into how users read these texts, using Barthes' work on mythologies. Having done this, we shall move into picking on one gamer mythology, which is the 4x gamer. After we explain why this is not an innocent choice and that other case studies might be, at the very least, problematic, we shall see how semiotic elements in 4x games are read by 4x gamers as opposed to non-4x gamers. Having done this, we shall briefly explain how realising these semiotic elements might lead both to better game analysis as well as potentially automated game development.

TEXTUAL SYSTEMS
It is first essential to justify the statement that games are textual systems. Within literary theory, a text is generally understood as something that can be read – very simply, everything can be and is a text, if approached using a particular critical lens. When we further expand this and state that games are a textual system, we are stating that games contain multiple micro-texts that interact together in a variety of ways to form a macro-text. Furthermore, since this explanation does not stop a building (macro-text) with bricks (micro-texts) from being called a textual system, the interaction between each micro-text must be non-trivial, variable and it should render a different macro-text.

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Espen Aarseth (1997)'s *Cybertext* was one of the earlier works in game studies to explore such relationships within digital games. Aarseth moved to discuss games, alongside other things such as hypertext, as ergodic literature – systems where extranoemetic effort is required to read the text. However, he also explains how user effort that generates multiple varieties of text creates a sub-type of ergodic literature - cybertext. Therefore, reading a stream of wikipedia pages would be ergodic literature, since it requires targeted clicks to traverse nodes. However, it would not be cybertext, as every click is predictable and non-variant; every click moves you from one specific node to another. A digital game requires player activity to make units interact with each other in meaningful and innovative ways, making it cybertext. Aarseth later expands into explaining that in cybertext, the rules of interaction are embedded within it. Although the text generated can be read in an infinite amount of ways, as we shall later explore using Barthes, only a limited amount of texts can be generated.

For example, imagine there are four objects in a game; A, B, C and D, and you can only move once from one object to another before the game terminates – that would mean that, if the direction in which the moves are performed mattered, there would be a total of twelve possible outcomes. This does not mean that there are twelve possible macro-texts; some outcomes might not be meaningful or even possible, clearly showing how the amount of macro-texts that can be generated is limited. Yet the interaction between micro-texts' readings are not limited to what the macro-text can achieve. This is why Bogost (2008) advocates for a view of games that is unit operational, rather than system operational. Bogost suggests that we study digital games through the micro-texts that form the system. Only in this way can we truly appreciate the relationship that units have with each other. Viewing games systemically suggests a focus on either an end orientation (how the units get together to form a system) or a centralisation (how the units help the system at large). However, what makes a work truly cybertextual is the unique relationship units share with each other, independent of the system.

We have now explained why we shall be calling units, within a system, micro-texts. We have also stated that studying these units over the systems they inhabit is more likely to be fruitful as it illustrates unique individual relationships rather than one generalised cohesive system. The next step would be to adopt a way of exploring these units. This leads us to semiotics.

SIGNS AND SIGNIFICATION

Before we explore this topic, it is important to note that units themselves are often systems. Deconstructing systems beyond the realm of speech and even thought, while potentially more fruitful, would make this subject quite impossible to explicate. For example, a poem can be a macro-text with words as micro-text. In turn, each word can be a macro-text with their tonality, morphology, or stress as micro-texts. Each of these might again be further divided. This next section will operate with the knowledge that further division is possible, but perhaps not ideal for this paper.

Barthes (1972), influenced by Saussure's earlier work, explains how when we conceive of an object, there are three distinct ways in which we do so; as a sign, as a signifier and as being signified. The sign is the object itself as it exists in the actual world, the signifier is what we explicate when we are thinking and referring to this sign and the signified is what is ultimately understood. For example, think of a tree. The word ‘tree’ that I used to prime you into thinking about the tree is the signifier. It signifies a real referent; the

object with branches, leaves, roots and maybe fruit too. This real referent is the sign. What you understand from my signifier would be the signified.

The distinction between the signifier and the signified might not always be present. However, my conception of a tree might be different from someone else's. I might imagine an autumnal tree while someone might imagine an evergreen tree. Additionally, there might be a disparity in language, dialect and variety that might affect this – onto a different example, while someone in the south of the United States might understand any soft drink as coke, most other places would understand coke as a very specific type of soft drink.

One final variation to note, as other theorists such as Bolter (1996) stated, is that signs are constantly being renegotiated. What a signifier signifies now will change from what it will signify later. The meaning of the word 'fool' from sinful to silly did not happen immediately – this renegotiation was constantly happening. Myers (2003) applies this process of meaning renegotiation to digital games themselves, as he explains that play itself can be a process of semiosis, which in this case means meaning building.

MYTHOLOGIES

However, Barthes goes a step further by explaining that the sign, the shared idea of what something is, can also be a signifier to another real referent. The example he gives is that of a glass of wine. The signifier is "vin rouge" (red wine), the signified is the listener's conception of a glass of red wine (being what they hear) and the sign is the real life referent. However, he states, that a glass of red wine, when understood by the French bourgeois, is also a signifier of health and a good life. The sign, not the words said or understood, itself carries meaning which is usually more pervasive and subtle, that points towards a societal context beyond the common shared linguistic one.

Leading this back to digital games, within games this could be understood through a vase. In most modern social contexts, a vase is an ornament meant to be aesthetically pleasing. It may carry something of similar aesthetic value in it, such as flowers. However, while playing *Legend of Zelda* (most recent 2015), if a player saw a vase, they would immediately think to break it. The vases still maintain their notion of what they are. If you ask a *Legend of Zelda* player what a vase is, they would, most likely, not answer something that must be broken, but rather, they would most likely give a similar answer to what we gave. However, a *Legend of Zelda* player knows that a *Legend of Zelda* designer belongs to the same social group as them – were breaking the vase is the legitimate action. Not out of moral ambiguity or a taste for vandalism, but rather because rupees (monetary goods) are assigned to the player through the vase.

Barthes calls these social contexts 'mythologies', these being social contexts were people have signs signify more than what the signifier does. In his book, he explains a variety of mythologies, such as mythologies built around the world of wrestling, mythologies about advertising and so on. These mythologies propagate even within the gaming world, as we have shown through the *Legend of Zelda* example. We can further argue that there is a mythology not only behind games, but also behind the concept of being a gamer itself. For example, consider this article by Jill Scharr (2014). Jill opens by stating

> I play a lot of video games. My favorite Pokemon is Vulpix. I've played through Skyrim three times. My Destiny character is a female Hunter that I designed to look like Barbara Gordon from Batman: The Animated Series. I'm what you

would call a "gamer".

A lot of the signifiers, bar a few (Pokemon, Vulpix, and Skyrim, which are proper nouns) refer to signs which could possibly be understood by anyone within an English speaking language sphere. Additionally, in her closing statement in the quoted paragraph she is justifying her position as a “gamer”. This juxtaposition of sentences implies that the signs that could reasonably be understood by most English speaker, might signify something more due to her positionality with games. We could argue that her usage of these signifiers in this particular manner illustrates her position within a “gamer” mythology.

A clear example of this positionality would be the concept of “Hunter”. While locally, this would reference a person who hunts for game, in the gamer mythology, this signifies a character in a role playing game which specialises in archery, with a potential secondary focus on either survivalist skills or perhaps poison and traps. Her specific usage of the sign justifies her position within the mythology. Not only as someone who plays games, nor as someone who has preferences as to what games are, but specifically one who belongs within a social sphere where those sentences make new sense and give her a sense of belonging.

She goes on to argue about current issues within the gamer’s world, such as game ethics, exclusion and harassment, which are topics we are not going to address. However, what we shall address is

> As a result, Gamergate decided that Sarkeesian was not a “true gamer”.

This quote establishes a second mythology, or more specifically, a sub-mythology. Just as French Bourgeois is a sub-mythology to French (a group of people that have notions of identity, culture and other nation-bound ideas that other countries do not possess, or perhaps possess in a different way), ‘true gamer’ becomes a sub-mythology to ‘gamer’.

It is unclear, and not within the scope of this paper, what a ‘true-gamer’ is. However, it is clear that sufficient expansion of a mythology often ends up with the formation of offshoot sub-mythologies, with often, not only an expanded signification process, but also radically altered. Margaret Thatcher, as a sign, would elicit very distinct resignification from the English bourgeois and the English blue collar worker, despite both of these being sub-mythologies to English. Similarly, as the 'gamer' mythology expanded, so was an offshoot as 'true-gamer' created, which finds itself not only expanded, but also altered, from the 'gamer' mythology.

THE 4x GAMER

So far, we have sought to establish ‘gamer’ as a mythology and that the ‘gamer’ mythology, being large enough, has its own sub-mythologies. This will lead us to explore a specific sub-mythology – the ‘4x gamer’. We will use the ‘4x gamer’, more so than anything as an example. After we establish what a 4x gamer is, we will be able to enter a conversation about genrification as well as systematisation of sub-‘gamer’ mythologies, either for increased production efficiency or in order to create something for the sub-‘gamer’ that might not necessarily be a sub-game – something which invokes that ontology without it necessarily being a part of it.

We will first start by explaining what a 4x game is. A 4x game is usually a turn based strategy game, either physical or digital, where players control an empire and try to lead it to glory. They can usually do this in one of four ways – exploring, expanding, exploiting and exterminating, hence the four 'x's. The flavour of the game is usually in a high fantasy, science fiction or high history setting and it is almost exclusively played as a multi-player game, either against a real opponent or an AI opponent. Examples of games within this mythology include *Sid Meier's Civilisation* series (most recent 2014), *Endless Legend* (2014) and *Endless Space* (2012). Although the game-play varies significantly, the end orientation of the game is usually very similar – if your empire is the strongest at the end of the game or the only one left, you generally win.

A 4x gamer is a player that specifically plays and seeks 4x games. Even more specifically, signs within 4x games can be signifiers of very specific things a 4x gamer will understand, while a non-4x gamer would have to learn until they might eventually ascribe to this mythology as well.

For example, a hexagonal tile will be immediately understood as the smallest space that any in game unit can occupy, whether it is a military unit or a mercantile unit. While less than an hour with Civilisation might teach this to most players in the 'gamer' mythology, a '4x gamer' might be frustrated if this is not the default into what was promised or advertised as a 4x game as if the game does not produce this sign or produces this sign in a different context, they might misunderstand what the game is trying to convey. Signs are expected to signify what belongs in their respective mythology.

Another example, within the '4x gamer' mythology would be beakers often signifying scientific and technological advancements, while a heater-shield often signifies an empire's, or even a specific military unit's defensive score. These signs might be understood by more than just the 4x gamer – the heater-shield and the beaker were probably appropriated from a parent mythology, making the 'gamer' more likely to understand them than the value of a hexagonal tile. However, their significance within the game's system would definitely be clearer to the 4x gamer.

This said, 4x gamers are not immune to the sign renegotiation that we elaborated upon before. Hexagonal tiles representing a unit of space that can be used are a fairly new phenomenon. In earlier 4x games, square tiles were the default unit of space used. A long-time '4x gamer' might still understand what a square tile signifies but its status as archaic, confusing or perhaps retrospective will be definitely noted. Just as we, belonging to an English speaking mythology, can note connotations of 'fool' being sinful as archaic in language but still part of its ontology, so can the '4x gamer' note the square tile. As we can read a text from 800 years in the past and understand that the sign 'fool' signified something and is now signified by something else, so can the relationship with the square tile.

These signs, the language that is unique to 4x gamers, are what separate 4x games from similar, yet ultimately different, types of games. For example, the *Tropico* series (most recent 2014) shares very similar end orientation – having the best empire possible at the end of the game. While it still possesses some similar signs, it still lacks other signs that 4x gamers come to expect. For example, while it still has the beaker signifying technological advancement, it does not have hexagonal tiles (or any tiles for that matter). The distinction between mythologies becomes even clearer when some signs also signify something conflicting on a mythological level.

GENRIFICATION

This leads us to discuss the links between genre and myth. As Apperley (2006) suggests, genres are a complicated topic to understand within digital games. While narratologists tried to understand digital games through existing genre qualifiers such as visual and aesthetic devices, ludologists advocated that games should be divided through their ludic features. Apperley had advocated for a remediation of the two fields in order to form an academic discourse about game genres that goes beyond the stunted state of game journalism genrification.

Understanding the semiotic and mythological layers underlying a game could instead be how this remediation occurs. When one studies the narratological aspects, they are studying the signs being put inside the game. These signs can be understood by anyone looking at the game, not just a 'gamer', which is what makes narratological reading of games possible at some level – an understanding of shared signs through a common language. However, on a narratological level, these signs might be devoid of their belonging within a mythology or instead risk not being acknowledged as part of a mythology. The hexagonal tiles in a 4x game only signify what they do because someone who knows the language, and belongs to its mythology, designed it to. The narratologist who belongs to the mythology might not acknowledge his belonging, and perpetuate a common reading while the narratologist that does not belong to the mythology might miss the sign's resignification process, which can often be more drastic than simply unintuitive GUI.

The ludological features happen when these signs have already become signifiers. As a player plays a game, there is an immediate process of remediation with the signs designed inside the game. Therefore on a ludological level, the myth is in a constant struggle to maintain itself. The designers definitely do not belong to one myth, as neither do the players. This makes classification simply on ludological grounds, increasingly problematic due to this continuous semiotic remediation. Statements such as 'ludic features' become incredibly difficult to define and maintain.

Instead I propose that we look at genrification through one of the mythologies they belong to. When there are people interacting with specific games in specific manners, through a familiarity created by shared signs between games, this in turn forms a mythology: an ontology of shared understanding. Approaching genrification using this method will allow us to approach subject topics both narratologically as well as lusively, both from a player perspective as well as a design perspective. Our only restriction will be gaging what level of granularity we should adopt within certain discourse – when it is more appropriate to discuss the 'gamer' over the '4x gamer' over even the 'Civ gamer'. Genrification's struggle will be how close we keep the magnifying glass over how big the magnifying glass is.

Explicating 'games' as a genre will be very unlikely to be satisfactory since this includes a range of phenomena from Sudoku to Call of Duty. As we have earlier stated, sub-myths might override the meaning of a sign within the myth. This leads us back to 4x games – if we understood what signs were remediated, understood and designed to accommodate the 4x gamer, then we can understand what the genre of 4x games entails.

The choice of 4x games specifically was not innocent – 4x games are probably amongst the most specific gamer mythologies we can study, with the least amount of ontological overlap with over mythologies. For example, the narrative features rarely vary past the science fiction, high fantasy or high history themes. The objective features never vary

either – it is always oriented towards empire supremacy. The operative features rarely vary too – these games are almost exclusively turn based strategies for desktop computers operated using a mouse dominantly and a keyboard for short-cuts to make the game-play smoother and quicker.

With all these features remaining constant, finding the remediation that occurred throughout the genre's ontological progression becomes much easier as we can isolate the signs that are specific to the mythology. The change to hexagonal tiles for example is easily isolated to 4x games, as the games that adopted this share the above narrative, objective and operative features. Knowing this, we can not only state what genre a game was in when it was created, but through tracking the growth of the mythology, we can expand to what genre a game belongs to now, what mythologies it potentially created or influenced through its semiotic remediations and what mythologies influenced it.

For example, we can state that despite not having hexagonal tiles, which we have established are very commonly a feature of 4x games, *Civilisation IV* (2005) is definitely considered a 4x game. Despite not possessing a feature that is now typical of the genre, through understanding the ontological growth of the mythology, and knowing that the adaptation to hexes in *Civilisation V* (2010) was achieved through sign remediation in *Civilisation IV*, we can still call *Civilisation IV* a 4x game, and see why it is so.

Other genres, where the narrative, objective and operative growth vary, would be much harder to specify and explore. For example, if there is a 'platformer' mythology, it would possess many different types of narratives and operative features, with the objective sometimes being different too. Even if we try to elucidate on a further sub-mythology to equate for this with a 'puzzle-platformer' mythology, these three features that were so immediately obvious within 4x games still remain unclear – *Portal* (2007) and *And Yet it Moves* (2009) share completely different narratives and operatives. Even more so, both overwrite more common 'platformer' signs such as things you can jump on, coins you can collect or points you can accumulate.

It remains unclear whether people that play these games are part of the same sub-mythology with the underlying signs they expect are present throughout and are being constantly remediated or if players that play these games subscribe to different sub-mythologies. Further thorough analysis of the signs present within these games and what they signify to the people playing them would be necessary. Additionally, grabbing what we feel is a significant ontic point in the mythology (such as perhaps *Super Mario Bros.* (1985) for the 'platformer' mythology), could be a decent first step in tracking the etymological growth of a mythology.

GENERATION

This said, having established that the signs signifying something to 4x gamers are much more easily located and specified in 4x games, it should be theoretically possible to create a program that generates 4x games, or generates changes to 4x games, that are still sufficient to 4x gamers. Creating programs that procedurally create content based on established shared signs in 4x games could not only potentially be an interesting way to approach design based on semiotic knowledge, but could also reveal pervasive meaning present through unnoticed signification within this specific sub-mythology.

Such programs have been made for language already since language has been thoroughly studied semiotically, at least more so than 4x games for sure. This made programs such as CleverBot and Eliza possible. This said, even these programs possess problems – signs

that are not easily isolated, such as humour, are usually not featured.

Isolating all the signs within 4x games would be equally hard. As a mythology is being remediated, the signs and the ontological make-up of the mythology start becoming exponentially more complicated. However, if we first isolate which signs are significant for 4x gamers and which are not, then we can at least try to procedurally generate those that are significant and randomly generate (with set parameters) those that are not, which could in turn create significantly interesting 4x games. This is not a far-cry from random map generation in *Civilisation V*, which generates gameplay conditions over gameplay.

Programs such as this also already exist within game design, such as Pippin Barr's *Get X Avoid Y* (2014). The game instructs players to get one symbol and avoid the other – after the first trial run, it randomly generates (from an array), the new visuals. Mythologising *Get X Avoid Y* players might be problematic, since a clear remediable precedent for the game is not present. However, it sets a precedent for doing similar work within other genres.

As mentioned, if we were to look at the 4x game again, this generation from the isolation of signs can be useful in more ways than one. Firstly, and perhaps most obviously, it could iterate lusively by generating interesting design ideas that were not previously considered. For example, a program that isolated each type of resource and replaced it with a different type of resource, from closely related areas (science to steampunk magic, for example) to wildly different ones (science to unicorn hairs) might cause inspiration for a new game, inspired by the 4x game ontology - for example, there should theoretically be no reason why 4x game mechanics couldn't be applied to a 'Build your Own Unicorn' first person strategy. Brute forcing isolated resources might even render a game that could be considered more amenable to markets.

However, sign isolation could also help us get ideas across to people that belong within the owner of these reiterated signs. For example, Barthes (1972) explains that luchador wrestling is often used as a way of reiterating the values of good and evil (through the colour of the luchador masks), of selfless value (through the masked perpetrator of good) and of overcoming struggle (as the fight implies) – everyone knew that the fights were staged, to a certain extent. However, that did not reduce the messages' penetration. Additionally, delivering unrelated messages to people belonging within the mythology could be easily achieved through the strongest signs (for example, consider how effective celebrity endorsements can be).

William Huber (2014) explained how 4x games are currently still geared towards a colonial rhetoric, even when these games escape the colonial shackles that their fantasy setting sets them in (as *Civilisation: Beyond Earth* does). A fruitful way of displaying these narrative restraints, within the confines of game design, would be through adopting similar language as 4x games and yet somehow subverting it. For example, what would be better critical reflection, of the destruction of so-called non-civilisation, than a *Civilisation* game where one plays the barbarians, defeated within the first 100 years of the game.

CONCLUSION

In conclusion, in this work, we have strived to reach the following conclusions

- We should acknowledge digital games as textual systems, which will allow us to

apply our knowledge of text and systems to digital games, enriching how we can approach this topic.

- Current attempts at genrification do not deal with ontology well. While mythologisation is not the only way we can approach the ontological, it is definitely something we should look at within game studies.
- Through this mythologisation, not only will be able to classify things better, but also be allowed to iterate on these mythologies in a more meaningful and self-aware way.
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