Logos Language in Richard Garriot's *Tabula Rasa*: an Analysis of Symbols, Semantics and Textual Implications

Filippo Zanoli

The more we look at video games, especially at the most recent examples, the more we perceive a deep and intricate relationship with academic themes. Video games are becoming more and more intertextually interlaced with high culture (other than self-referential mass culture) and *vice versa*; the phenomenon that we refer to as *game authoriality* has certainly helped, and is still helping to emancipate the *gamers' medium* in many different ways. Actually, a video game designer may be compared to a movie director, or to the writer of an interactive, synaesthesic opera – merging various stimuli as well as written text. In this article, I will attempt to illustrate how an author like Richard Garriot can experiment with massive multiplayer online worlds; in particular how he has done this with his latest development, *Tabula Rasa*. Moreover, I will examine how the fact of inserting an artificial, pictographic-language – *the Logoi* – into the game, can radically change some textual perspectives of the game itself. Within this analysis, I will explore what the *Logoi* are, how they work, how they become part of the game mechanics, the process of their linguistic acquisition, and most obviously, the textual implications of its very presence.

1. A bit of History

Tabula Rasa, was officially released on November 2, 2007. The game features an interstellar, epic battle between the Human Alliance and the invading alien forces of Thrax. Thrax eventually wipes out Earth in the relatively far future. The Alliance, composed only of the elite of the human race, now continues the fight against the "space invaders" with the help of a legacy inherited from an ancient alien race – the Eloh. To win the battle, humanity must learn how to use the *Logoi*, the powerful language of their *atavic*, alien ancestors; the *Logoi* can unleash amazing powers, capable of manipulating reality.

2. The Tabula

Within this context, the term *tabula rasa* indicates a "fresh start" for the human race as earth is destroyed. This concept has been widely diffused within philosophical circles, and debated upon since the time of Aristotle[1]. Greek and Roman students used to write and study on wax tablets, the surface of which would then be scraped to 'blankness' in order to write on them again. Tabula rasa is the "scraped tablet" and also a "blank tablet" on which one can write *de nuo*. This particular image of the "scraped tablet" was used by Aristotle when referring to the process of thinking; the blank mind is the tablet *(grammateion)* on which thoughts and letters appear every time one thinks – and then they disappear. More pertinent to this analysis is the concept of *tabula rasa* as described by Avicenna (see Rizvi 2006); here a *tabula rasa* is deeply rooted in the process of data acquisition by our intellect. From birth, we build our "cognitive scripts" on this blank space using empirical analysis and logical syllogisms, in order to understand universal meanings and "the grammar of being". Centuries later, John Locke (*An essay concerning human understanding*) revived the *tabula rasa* debate. He used it as the keyword and founding stone of the epistemological thesis affirming that human beings, as individuals, are born without any innate mental-content; their entire knowledge base is built up gradually – like the carving in that metaphorical "blank tablet" – from experiences and sensory perceptions of the outside world. Some of these concepts are found in the video game Tabula Rasa – humanity facing an immensely frightening, unknown new world. One could liken it to an individual who is living a sort of "second childhood". Survival depends upon the process of cognitive mapping of the environment, and linguistic growth: in our case, of the *Logoi*, which are a powerful, necessary resource.

3. The Logos

Having explored the *Tabula*, our next task is to better understand the *Logoi*. The *Logoi* are a set of pictographic symbols, organized in a language. This language was conceived by Garriot's team in order to fit into the game world, and to be a part of the overall game design as well.

The single *Logos* is the basic unity of this language; it has always a meaning, (that can be simple, or complex)

Fig. 1 – Two examples of Logoi: the left one means 'inside', the right one 'honor'

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Fig. 2 – A sentence made by Logoi that means "The war for control of the Cosmos"; from left to right, the Logoi for: 'the', 'war', 'for', 'control', "of the" and 'cosmos'

and it can be combined with others in order to build a sentence or utterance. Like the expression *tabula rasa*, *logos* is an important, polysemic term that can be found in philosophical and rhetorical debates. It derives from the Greek verb *lego* that means (to) speak, (to) tell[2]; for this reason, *logos* becomes "the subject, the topic of discourse" and the most important 'word'; in that the 'word' may be thought, spoken or written. The term *logos* was first used in philosophy by Hieraclitus, who analyzed it as word (see Johansen 1997). The term was also used by the Sophists (as discourse), Aristotle (as one of the elements of rhetoric – logic) and the Stoics (see Tripolitis 2002, pp. 37-38), who considered the *logos spermatikos* as the *arké* of the whole universe.The *Logoi* in Richard Garriot's gameworld, are a very useful resource for the player, as they ascribe special powers and abilities to face alien forces. The *Logoi* can summon thunder, and flaming explosions, but they can also heal, and teleport people, etc. The *Logos* language is pragmatic, and powerful – it can be used to accomplish tasks within the game universe. This concept of language embodies both the primitive (and superstitious) idea of words as magic spells, capable of managing or altering reality (for example: to noun = to make happen, to make appear) and the theories of romantic linguists like Von Humboldt (see Schulz 2001), that looked at language as a force capable of catalyzing the *Zeitgeist* – the core intentions of its users (the people) – and of making them a building force in the real world.

4. Morphosyntax: grammar and semantics of the *Logoi*

The *Logos* language is composed of 188 different symbols. Each symbol has different, specific grammatical functions: most of them are lexical and verbal *Logoi* (we will see how these two groups are closely linked together); there are also prepositional and pronominal *Logoi*, adjectival *Logoi*, and a single *Logos* that covers the article function ('the').

4.1 Lexical *Logoi*

As previously mentioned, lexical *Logoi* are the absolute majority, with 89 symbols. They use iconic[3] pictograms (pictures resembling what they signify) to represent and directly refer to objects and beings. This resembles the very same progress we (as *homo sapiens*) made from the drawing of hunting scenes, and the use of icons for communicative purposes, to the use of numerical, graphical and alphabetical symbols. Surely arbitrary languages were less pragmatic and transparent, but yet more powerful, versatile, and precise. The iconic aspect of the *Logoi* can be prominent as illustrated in fig.3.
A link between video games, primitive pictograms, and drawings has already been made by M. Lamoureux; in his essay *Primitive 8-bit* (in Compton 2004), he observes graphical similarities between those two forms. Those similarities surpass the pure aesthetical level upon which we perceive the video game – it is a particularly powerful tool which creates representations of the world.

4.2 Verbal *Logoi*

The verbal *Logoi* are the second major group (39 symbols). Verbal and nominal *Logoi* are closely bound. "Polysemic interferences" may often be found; in fact it is possible for the same pictogram to have both a nominal and a verbal meaning. For example, the 'love' *Logos*, can be used both nominally ('love') and verbally ("to love"). Verbal *Logoi*, like the others, cannot be conjugated, and are given in non-finite forms (usually in the infinitive or gerund form).

4.3 Other *Logoi*

The last *Logoi* groups are smaller than the others we have seen: there are (15) pronominal *Logoi*, (14) adjectival, (11) prepositional and (3) adverbial one, plus 3 symbols which operate as conjunctions, and 1 article. It is quite surprising to find some of them in a lexigram-based language, whose grammar is usually not complex – and for this reason they rarely need pronouns, conjunctions or articles.

5. Acquisition of *Logoi*

Putting aside the strictly linguistic issues of the *Logoi* corpus, we head directly into analyzing the game dynamics. As space marines, existing and fighting for our lives on the surface of planets Arieki and Foreas, we surely do not need a Ph.D. or a Masters in acquisitional linguistics to access, and gain, the *Logoi*. The conquest of our new (virtual) vocabulary is simply achieved with a rather routine approach, that can be found in every online role-playing world: the *quest*. Initially you receive the "find the *Logos* quest", you locate and get to the object via the very useful mini map. When you have gotten to the object, you learn it by clicking on the shim-

Fig. 3 – Two lexical Logoi 'night' (left) and 'bomb' (right)

Fig. 4 – Two verbal Logoi: 'have' (left) and 'looking' (right)

mering azure Eloh beacon; you then watch the animation of your *avatar*, magically 'interiorizing' the *Logos*, and *les jeux son faits*. This process of *Logos* acquisition would be painfully uninteresting if it were not for some significant exceptions – the *Logos* doors. The *Logoi* can be found everywhere, but they are often located within the depths of the Earth, in hidden caves. Sometimes those caves are sealed with an energy door that can be opened with just a click; other times however, you need a special key. Those keys are the very same *Logoi* that are on our *tabula*. The following example will illustrate this point. In order to open the door that leads to the 'summon' *Logos,* we need to have learned the *Logoi* for 'friend', 'star', 'life', 'enlighten' and 'here'. The acquisition of 'summon' could give some unique abilities to our *avatar* (determined by his/her in-game role). The unique abilities could be: summoning a friend via teleport onto the battleground to help us, or raising a comrade from death. This explains how the other *Logoi* needed to open the door are semantically linked to this one. Some familiarity with René Descartes' philosophy of language[4] permits us to find interesting semantic links between the *Logos* and the Cartesian 'concept'; Descartes' 'concept', is a private mental construct which has been inferred from the environment. Asserting that someone posses the concept 'P', also assumes that this individual posses the prior psychological concepts of which 'P' is said to be formed of. For example, to understand the concept of 'P', one must fully comprehend the meanings of sub-concepts like 'p', 'q', 'r'; it is also possible to consider 'p' as a self-standing concept that may be composed of other sub-concepts, and so on. How can this be useful for our analysis? In order to obtain the 'summon' *Logos,* we need to have learned four other *Logoi,* which can be acquired freely without any prerequisite. It is useful to define 'summon' as a 'second level' *Logos*. Other ones, like 'friend' could be defined as 'first level' *Logoi*. Hypothesizing the presence

Fig. 5 – A pronominal ('you', left) and a prepositional Logoi ('near', right)

of a *Logos* able to be unlocked only by 'second level' ones, it would be referred to as a 'third level' *Logos*, and so on. This approach allows the player to create a hierarchical map of the *Logoi*. In other words, the more abstract and specific the *Logoi* are, the more valuable and powerful they will be in the game-economy. The in-game process of alphabetization is very similar to the dynamics we use to link words to cognitive scripts, and to build semantic and linguistic maps.

6. *Logoi*: game text and game experience

Following this in-depth look at the *Logos* language, my analysis continues with the first of a long list of unsolved questions: How does this language really fit into the game mechanics? As previously mentioned, the *Logoi* are substantially quests, and game objectives; they are also vital tools for the players – ascribing powerful, magical skills to be used against the hordes of Thrax. The question remains: do they really have linguistic or communicative uses (as every language is supposed to)?

6.1 A bag full of unsolved questions

If we look back at how Tabula Rasa was developed, we discover that the project ran into many problems; these obstacles critically altered some aspects of the game. We really do not know if Garriot kept total control of his 'creature', or if he had been slightly sidelined in the final steps of development. I maintain that the idea of the *Logos* (a completely artificial, pictographic language used to thrill players with riddles they need to solve in order to progress deeper into the game) belongs almost surely to Garriot. This is a fascinating feature certainly, and does add depth to the background of the game; however if we talk about game dynamics, the importance of the *Logoi* as a structured language is totally secondary. The *Logoi* are never actively used by players; they are completely passive components which, once acquired, only give the *avatar* special new abilities. The player can not use them directly, or purposefully; if they were colored talismans, spheres or other objects that could be won in a fixed order to be effective, the result in game terms would be exactly the same. Second, the *Logoi* are organized as a language (a set of symbols, ruled by a grammar, that can be used for communication), but this language is not used between the players to communicate. One could certainly argue that lexigrams are not the most suitable mode of communica-

tion, especially considering how much more effective vocal or textual chatting is. It is important to note that the game does not give the player the opportunity to use *Logoi* in a communicative context. It would be ridiculous for people who share the same alphabetical knowledge, to communicate by drawing complex symbols.

6.2 *Logoi*, a futile work?

Considering the former, another question becomes compulsive: Was the work invested in creating the 188 pictograms constituting the *Logos* language worth it?. Again, there is no simple answer. The *Logoi* do give a real boost on the background-lore level of the game; this is one of the most crucial aspects of role-playing games. Players are really concerned about those alien pictograms, and feel that retrieving them, and learning about them, is important; maybe more important that any other experience-giving task offered by the game. It is no secret that Tabula Rasa gives importance to game situations and aspects which, in other massive role-playing games, are secondary. If the *Logos* 'heal' gives the player's *avatar* the power to heal others, its function is then not very different from the flower power-up of *Super Mario Bros.* (except for the fact that if you are hit, you do not lose your newly acquired skills – you can not lose a *Logos* you have caught, even by dying). The fact that this complex system of enhancements has been organized in an organic, structured-system of signs called a 'language' is really intriguing – but was it necessary?
The aspect that perplexes me the most is the complete failure of the *Logoi* to operate as a communicative tool; there is no real active communication or interaction between players using the *Logoi*. With respect to game-dynamics the *Logoi* appear to be nothing more than 'folklore'. Still, this is no real loss, since I will illustrate that the complexity of the *Logoi* lies deeper – in the textual structure of the video game itself.

6.3 Exploring the cyber-text for answers

Considering the textual duality exposed by Aarseth (1997) dividing the game text into a superficial structure (*text* or "the video game as we see it" composed by *textons*) and a deep structure (*script*, "the assembled binary code" composed by *scriptons*, ante-textual unities), and also introducing the inter-textual conversation (Bettetini 1986: 42-43), could probably help us to uncover some of the "hidden functions" of the *Logoi*. We can find a similar duality of superficial and deep structures in Chomsky (1957). He affirms that deep and surface structures are a part of the process of attribution of meaning; this process is related to utterances made in a particular environment, and their abstracted representation. Chomsky also gives great importance to the dynamics of mutual self-definition between the two structures, involving transformational rules. Aarseth's cyber-text dwells in a continuative processing; this involves both deep and superficial structures (and sub-structures). The reason for this is that the video game itself is not only a text, but also a text-generating matrix – a matrix that must react and adequately answer back to any of the player's *stimuli*. Aarseth outlines a *transversal function* that translates from scriptons to textons: a process of translation/combination from invisible (subjacent) signs, to visible (superjacent) signs.
I have referred to the process of textual interaction using the expression "inter-textual conversation" for a preci-

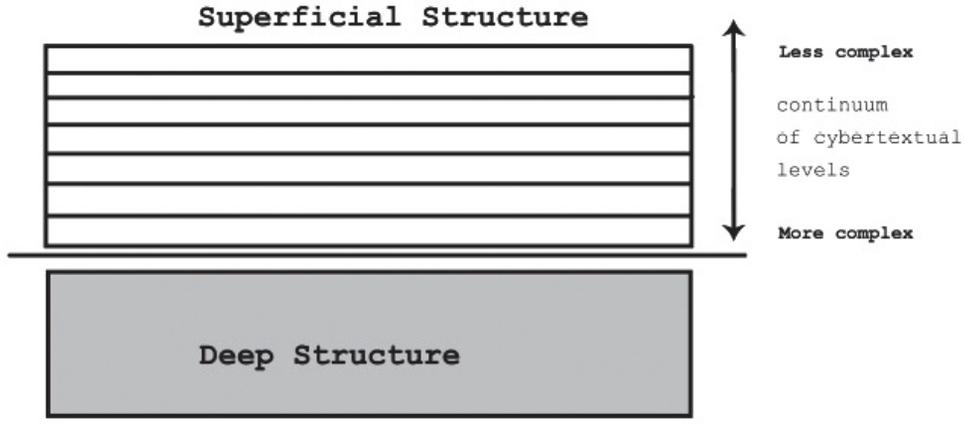

Fig. 6 – The textual continuum of the cyber-text's superficial structure

se purpose: like any conversation it can be heard by a non-involved (but attentive) listener. Most of the time, speakers are polite (or sly) enough not to be overheard by strangers; this allows the conversation to be more or less transparent from an outside perspective. There are cases however – particularly intricate ones – in which one of the very purposes of the conversation is to be (partially or entirely) heard by others. That, I think, is the case of the *Logoi*. Carlo Molina (Bittanti 2002, p. 183) expands Aarseth's concept of scripton by introducing brand new macro and micro categories. One of those categories is particularly interesting for the purpose of this article: Molina's *visual binding scriptons* ("*scriptons* visibili obbligati"). These are fixed and uneditable routines of the deep, cyber-textual structure. Players can see and interact with it, but cannot modify it. We can certainly assert that the *Logoi* are visual binding scriptons. They are also a surface manifestation of deeper, binary routines; routines involving the behavior, competence, and powers of the player himself. At this point, where are we supposed to locate this meta-textual level of syntactical organization that are the *Logoi*? Surely, the superficial structure exposed by Aarseth at this point, appears sufficient only if we try to consider it as a *continuum* of syntactical and semantic complexity. This because every single *Logos* (as symbol representing a complex game mechanic), and the very *Logos* language as a system of rules, simply cannot be (textually) located at the same level as the other elements we might address as less complex.

6.4 Levels of complexity: the *Sprite* and the *Logos*

In an effort to better expose what this *continuum* is supposed to be, I will explain my last assertion that the *Logoi* are textually more complex than the other elements of the superficial cyber-text. Let us call *Sprite* (borrowing a technical term, and creating a brand new meaning from it) every object that is visible in the superficial text. In Super Mario Bros. for example, Mario, all of his enemies, and all of the platforms around the levels, are *Sprites*; similarly, Tabula Rasa's space marines and the Thrax hordes could be considered *Sprites*.

The *Logoi* are simultaneously *Sprites* (for example, a *Logos* in its function as a beacon of light, but also a blue glowing-symbol in the *tabula*-window of the interface) and signs referring to other *Sprites* or mechanics between them. For this simple reason, we cannot put any *Logos* at the same textual level as any of the *Sprites*. In 6.2, I claimed that the 'heal' *Logos* is not very different from the flower power-up of Super Mario Bros.; this holds true if we talk about game-play dynamics. The same assertion is false, as we have seen, if it is referred to the game-text and its semantics. The flower bonus is not transparent if we talk about semantics: Why is Mario supposed to throw fireballs when he takes it? We can hardly find links between his appearance and how he operates. This happens because his symbolic nature is arbitrary; we can give a meaning to it only by playing. It is a *sprite* and also a scripton; he is a relatively simple one too – one that doesn't have deep implications, or textual, semantic relations with the other bonus items of the game. The 'heal' *Logos* is an icon with a clear denomination ('heal'), a s*prite*, and a visual binding scripton; at the same time, it is involved with, and refers to, the dynamics of the game-play. This can be simple – involving only the single *Logoi*, like "healing others", or complex – involving more *Logoi*, like "life-force funnel" or "regeneration wave".

6.5 The hypothesis of (Meta) textual continuum

My analysis of the *Logoi has* shown that, in-game signs sometimes refer to other "game signs" or to mechanics involving "game signs". For this reason, we can hypothesize that a hierarchy exists between signs and meta-textual levels, in the superficial game text. Those levels can be organized in a continuum, simply because we can also hypothesize more complex items; these more complex items could refer to the *Logoi* (the very same way they do with s*prites)*. The following figure shows how this meta-textual *continuum* is supposed to

work: the surface level is the one nearest to the player, the one on which we can find the *sprites*. The more we grow in complexity, the closer we move towards the hidden structure, and the scriptons.

7. Conclusions and predictions for the future

Considering the continuative hypothesis of the game's superficial level-text surely opens up some new issues. The first is the chance for a multi-level, symbol-based analysis of in-game dynamics; of course the surging problem of "textual economy" involving the gaming process, and the game-text, still remains.

Creating an effective diagram of the video game's textual structure is not easy. As previously stated, it is a text that is constantly shaped by a predetermined, subjacent structure (the binary code). Often it directly inherits some of its functions from its underground counterpart and hierarchies. With this new perspective, the schematization appears even more laborious, but surely, more satisfying and accurate. An analytical approach revealed by Chomskian studies, based on generative grammars, and grammatical hierarchies, could be very revealing; especially if we consider the comparative grammar studies perspective, involving all cyber-textual levels, and sub-levels of the hypothesized *continuum*.

Notes

[1] See Aristotle, On the Soul, 3.4.430a1.

[2] See the entries for logos and lego on Liddel & Scott 1996.

[3] For icon / iconic and symbol see Peirce 1867.

[4] For Cartesian concepts related to language acquisition (but also pictograms in language acquisition) see Shanker 1998.

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