

1. Computer games: texts or practices?

In the last years, semiotics has been engaged in a heated debate about the complex relationship between texts and practices, a problem that entails several theoretical and methodological issues. This debate has arisen when semiotics expanded its attention to new objects of analysis, traditionally not studied by semiotics. Indeed the empirical vocation of the discipline prompts us to analyse new meaningful objects, and, at the same time, any extension makes it necessary to rethink and redefine both methodological tools and operative concepts.

This paper arises from the acknowledgement that analysing peculiar objects like computer games could give the chance to investigate the relationship between texts and practices and to try out one of the most basic concepts of semiotics: *enunciation*. This concept, which has taken different forms since the 60s, refers on one hand to the ways in which a meaningful object (eg. a novel, a movie, a picture, a speech ...) is embedded in the act of production and reception of the object itself, and on the other hand to the ways in which this act of production and reception is represented and simulated into the object itself. We believe that the analysis of computer games should be very interesting for semiotics. On the one hand, computer games share some characteristics with traditional texts, because they are *artefacts*¹ with an identifiable structure which makes them *interpretable* and *meaningful*. Therefore, they can be analysed with semiotic tools. But on the other hand, they possess peculiarities, such as interactivity, immersiveness, unpredictability, which call into question concepts and tools traditionally used in semiotic analysis for other cultural forms. From this perspective, first we should question if computer games can be considered as *texts*. In fact, in Game Studies this topic has been faced by several scholars and has characterized even the heated dialogue between so-called ludologists and narratologists. It is not possible in this paper to resume the many contributions and perspectives arisen from that discussion, but we would try to consider the topic from a semiotic perspective, in order to show how a semiotic approach can be used to study computer games².

To this purpose it is important to clarify that semiotics uses the term 'text' in a sense much wider than commonly used. In common sense, 'text' refers to any form of written material, in particular using verbal language, or in any case it refers to some static, fastened, closed and complete object. In such a perspective, several contributions have highlighted that it may be problematic to apply a textualist approach to dynamic and changing objects like games. As Bittanti has underlined, "problems arise when we attempt to apply the textualist model to complex and basically not packagable phenomena [...]: here the term 'text' loses its meaning entirely, attempting to explain phenomena that are not complete and readable at all" (Bittanti 2004, our tr.). Bittanti uses the term 'text' to refer to a meaningful object that



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is static, closed, delimited and complete: actually, such a meaning of the term is not likely to be applied to computer games, which are objects "fluid like a river in flood". But semiotics provides us with a wider definition of 'text', intended as "any object potentially interpretable by someone" (Pozzato 2001, p. 97, our tr.)³. So, in semiotic terms, computer games can be considered as texts, because they are potentially interpretable and meaningful artefacts. Moreover, many computer games (in particular the ones Jesper Juul calls 'progression games'⁴) share further more specific features with other kinds of text, like literary ones. As Aarseth says, a lot of electronic texts "aren't essentially different from other literary texts, because (1) all literature is to some extent indeterminate, nonlinear, and different for every reading, (2) the reader has to make choices in order to make sense of the text, and finally (3) a text cannot really be nonlinear because the reader can read it only one sequence at a time, anyway" (Aarseth 1997, p. 2). In addition, it is important to underline that every computer game (and not only progression games) can be seen as a *syncretic text*, that is a meaningful artefact that involves a plurality of languages combined in a whole project of significance⁵. So, from a semiotic point of view, a computer game can be considered as a text that remediates⁶ conventions and configurations used in other media. Indeed, the videoludic medium "reprocesses and reinvents codes and languages of various traditional media in order to create something new" (Fraschini 2002, p. 90, our tr.). In spite of all this, it is undeniable that many semiotic tools and concepts, developed for the analysis of objects like novels, tales or movies, need a rethink when we analyse computer games. The most important reason for this is that computer games activate a *very singular form of interpretation*, compared to traditional forms of text. Even Aarseth, in his work on ergodic literature⁷, has underlined that "during the cybertextual pro-

cess, the user will have effectuated a semiotic sequence, and this selective movement is a work of physical construction that the various concepts of ‘reading’ do not account for” (Aarseth 1997, p. 1). In fact, the act of playing a computer game magnifies an aspect of the interpretative process that, in other instances, remains dormant: namely, its *performative* and *configurative* dimension. In other words, ‘interpreting’ can mean not only ‘reading’ and ‘understanding’, but also ‘performing’ (Spaziant 2000). In that case, the act of interpretation gets to be an out-and-out *performance*, which involves a multi-dimensional work on the part of the player. So, the interpreter of a computer game is called to contribute in producing the videoludic text not only on the content plane, but also on the expression plane.

All these considerations lead us to acknowledge that the decisive element for a meaningful interpretation in computer games is the *performance*. In fact, a computer game is fully meaningful only in the perspective of someone who experiences it in first person and who contributes to the creation of the text by means of a pragmatic process (that is, manipulating the expression plane of the text, in addition to the content plane).

In conclusion, if computer games can be justifiably considered texts, it is also necessary to rethink the boundaries of textuality itself, taking into account that the meaning of a videoludic text also depends both on the player’s *performance* and on the player’s *experience*. In this perspective, computer games can be seen as *texts able to generate practices*⁸ – which are meaningful to someone who performs them – and *experiences* – which are meaningful to someone who lives them in first person. In some respects, our proposal is consistent with the perspective of Juul (2005). He underlines the double nature of games, which are objects and activities at the same time: “‘Game’ can mean two things: a static object or artefact or an activity or event that players perform” (p. 43). Besides, Juul suggests that we can’t fully understand a game only considering it as an artefact because “games that are formally equivalent can be experienced completely differently” (p. 52).

2. Videoludic enunciation and gameplay

Because of several peculiar features of computer games, we also need to rethink the concept of *enunciation*. As Violi suggests, new forms of interactive textuality “force us to rethink the format of communicative models that we use, the role of enunciation and the relationship between orality and writing” (Violi 2001, p. 145, our tr.).

2.1 Enunciation between pragmatics and semiotics

Enunciation is one of the most problematic concepts of semiotics since the sixties; so, in this paper it is not possible to deepen its heterogeneous development⁹. Nevertheless, it could be important to individuate some

of the most relevant issues from the evolution of the concept. The concept of enunciation was introduced by the linguist Benveniste (1970), with reference to the use of the verbal language in communicative situations in which the interlocutors are *in presentia*. Afterwards, semiotics has applied the concept of enunciation to written and non-verbal texts in which enunciator and enunciatee are *in absentia*. Benveniste uses the term ‘enunciation’ in two different ways: on the one hand, it refers to an actual act that produces an utterance in a communicative context; on the other hand, it refers to a *linguistic process*, i.e. the process of “turning into discourse” (*mise-en-discours*) effected by the instance of enunciation. Psycholinguistic and sociolinguistic approaches have privileged the meaning of ‘enunciation’ as a pragmatic act, whereas semiotics has intended enunciation in purely linguistic terms, that is to say “as a linguistic domain which is logically presupposed by the very existence of the utterance (which contains traces or markers of the enunciation)” (Greimas & Courtés 1979, p. 103-105). According to structuralist semiotics, the analyst can never get at the real enunciation, but only at the “uttered enunciation” that is the linguistic record of the communicative situation, as it is expressed in the text itself. In other words, the “uttered enunciation” is the simulacrum that imitates the act of production of the text within the text itself.

It is important to notice that the two sides of enunciation – *pragmatic* and *simulacral*, as Violi (2001) calls them – have been separated for a long time: pragmatic enunciation has been more relevant in the study of oral texts, whereas simulacral enunciation has been revealed to be more pertinent in the analysis of written and non-verbal texts in which enunciator and enunciatee are *in absentia* (such as movies, paintings, photos). But both perspectives (pragmatic and simulacral) should be taken into account in the study of interactive texts, and in particular of computer games. Indeed, even though the player interacts with the game only by means of his/her *simulacra* represented on screen, however it is important to not forget that such interaction takes place within the pragmatic process of playing. In this way, player’s simulacra may become *digital protheses*, which allow the player to access the game world (§ 3).

2.2 Simulacral enunciation in computer games

Since computer games can be seen as syncretic texts (§1), simulacral enunciation itself is very complex because of the plurality of languages involved. The analysis of the “uttered enunciation” in computer games needs above all to take into consideration the visual and verbal elements that function as *traces* or *markers* of enunciation. Regarding visual enunciation, the analysis has to focus on elements such as perspective, point-of-view, shots and frames. Regarding verbal enunciation, the most important elements to take into account are deictic expressions such as personal pronouns, spatial

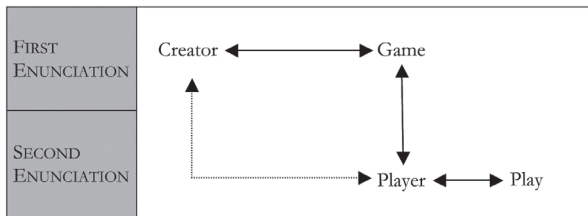


Fig. 1 – A semiotic model for videoludic enunciation

and temporal adverbs, verb tenses. Taking into account these visual and verbal traces of enunciation, the semiotic analysis allows us to explain in a measure how a computer game may affect the player's experience. For example, analyses can show how the use of the second person ('you'), instead of the third person ('he'/'she'), and the use of the present tense, instead of the past tense, may play a crucial role in the identification process. The analysis of simulacral enunciation can also explain how a first person shot angle in a computer game may create a more immersive experience than a third person shot angle may do. However, as we will see in the next paragraphs, the analysis of enunciation in computer games cannot just deal with these 'traces' of enunciation taken separately, but it needs to consider the complex relations among them. Besides, it needs also to consider these visual and verbal 'traces' within the wider framework of the *gameplay* process, intended as *ludic enunciation*.

2.3 Pragmatic enunciation in computer game

To clarify the last issue, we draw on the classic distinction between 'game' and 'play'¹⁰, framing it in semiotic terms. Applying the Hjelmslevian distinction "system vs process", we can intend a 'game' as an *abstract system* of rules and of relations among virtual elements, whereas 'play' can be seen as the *actualization* of these virtualities, outcoming from the pragmatic interaction between game and player. From this point of view, the transition from 'game' to 'play' is like an enunciation process in which the player takes a crucial role (fig.1).

Focusing on the player's role, we can say that, in the act of playing, the player is called to take different roles simultaneously: (1) the role of *enunciatee* both of the game and the play, because he interprets both the system of rules and relations between the virtual elements of the game and the outcomes of the playing, visualized on-screen; (2) the role of *enunciator* of the play, because he is called to perform a configurative act, transforming the virtual elements of the game in actual elements¹¹; (3) the role of actor, because it is called to live in the fictional world created by the game¹². Therefore, in such a perspective, *gameplay* can be seen as a very peculiar form of enunciation: an *enunciation in action*. So, in order to fully understand the meaning of a computer game, we need to take into account not only the *simulacra* of enunciation, expressed on screen, but also the complex relations between them and the '*embodied*' player, located in front of the screen¹³.

As Violi (2001) has underlined, the pragmatic enunciation – which she calls even "embodied enunciation" – is characterized by a temporality and by a sensory and phenomenological density that cannot be reduced to a simulacral model. In computer games, above all, we will have to take into account the relations between the player's body movements and the movements of his avatar in the game. Besides, a more comprehensive analysis should also consider figurative issues – in particular the degree of characterisation and personalization of an avatar – and modal issues – in particular the relations between the player's modal competence (to know, to want, to have to, to be able to; see Greimas & Courtés 1982) and that one of his avatar.

In conclusion, in computer games both simulacral and pragmatic enunciation come into action; therefore, the way in which the player is projected into the game world needs to be studied by analysing both the *simulacra* of enunciation and the relationship between such *simulacra* and the *embodied player*.

3. Player's alter-egos: simulacra or protheses?

After clarifying some important theoretical issues, we can proceed with an analysis of some different player simulacra or surrogates in computer games. In particular, in the last paragraphs we will try to answer to these questions: how are player-surrogates created in the game? By which means do player simulacra become alter-egos or protheses of the player in the game? And which types of player-surrogates can we recognize in different computer games? To this aim, we will start with a typology of digital protheses, worked out by Frascini (2002). Then we will try to enrich such typology by considering some additional factors. In particular, we will try to identify those variables that may affect the relationship between the player and his digital surrogates.

3.1 Digital protheses: a typology

Frascini (2002) has suggested that in computer games the player's simulacrum becomes a *digital prothesis*, that is "something that allows a human being to perform actions within a world in which he doesn't 'really' belong" (ivi, p. 100, our tr.). Similarly, Bettetini, Gasparini, Vittadini (1999) have suggested that in interactive texts, in addition to the symbolic instance that represents the user, a set of devices that function as an out-and-out prothesis is present. Such devices, indeed, allow the user to expand his capacities for acting within the text.

In this perspective, the player's *simulacra* are not mere representations of the player, but function as '*doors*' to enter into the game world. In fact, if there were no digital prothesis, the user of a computer game would not have the possibility to interact with the images on screen and he would become a mere spectator.

Anyway, it is important to underline that 'simulacra' and 'protheses' are related concepts, but they are not overlapping. Firstly, digital protheses aren't the only type of

Digital Prosthesis	Prosthesis Characterization	Alteration of player's identity	Examples
TRANSPARENT	minimum	null	cursor in <i>The Secret of Monkey Island</i>
VEHICLE		minimum	car in <i>Gran Turismo</i>
MASK		maximum	point of view in <i>Doom</i>
CHARACTER	maximum	ambiguous	Lara Croft in <i>Tomb Raider</i>

Fig. 2 – A typology of digital prostheses (see Fraschini 2002)

player simulacra that are present in a computer game: since computer games use several languages (above all visual and verbal ones), it is necessary to consider also *simulacra* not specific to digital media. Secondly, a digital prosthesis is a very peculiar kind of simulacrum: it is a simulacrum-interface. It is of symbolic nature, but, at the same time, it functions as a ‘door’ for accessing the game world. Fraschini suggests a typology of four different forms of digital prostheses, depending on their degree of characterization and their resulting capability of altering the player’s identity (Fig. 2). According to Fraschini, the more a digital prosthesis is characterized, the more the player tends to identify himself with it. But, if the degree of characterization gets to be more than a certain amount (like in character-prostheses), the player tends to oscillate between two positions: identification with the character (“he is me”) or collaboration with it (“he and I”). Fraschini explains that a *transparent-prosthesis* allows the player to interact with the game world, but at the same time, it is so unspecified that it does not give any additional properties to the user. When the player controls a *vehicle-prosthesis*, he tends to identify himself not with the vehicle (which is well-defined but not anthropomorphic), but with the pilot. *Mask-prostheses* are typical of FPS, in which the player tends to identify himself with the principal character. Such a character is endowed with a more specified identity, but it is still quite generic, so that the player tends to perceive the prosthesis as a mask to wear. Finally, a *character-prosthesis* has characteristics so specific that the player tends to perceive it as an ‘other’ (a ‘not-me’), but, at the same time, he tends to identify himself with the character and to engage emotionally with its adventures.

3.2 Other variables in player’s identification

Although we think that the Fraschini’s typology could be a very useful and operative tool, we wish to clarify that the identification in a prosthesis is a complex and stratified process in which other variables play a role as well as the degree of characterization. We believe the best way to specify such a complexity could be to illustrate some different ways in which the player and his surrogates interact with each other.

First, the issue of characterization itself should be specified more precisely. In fact, characterization may concern both the *visual representation* of a character (Mario Bros is represented in a more iconic way in *Super Mario Galaxy* than in *Donkey Kong*, even though it is the same character), and the *narrative construction* of a character (Lara Croft is endowed with a more accomplished identity than Pac-man, even though both prostheses can be labelled as character-prostheses). Moreover, since a player’s simulacrum becomes a prosthesis above all because the player can *control* it, it is necessary to take into account the degree of *personalization* of the prosthesis features and actions. For example, in *The Sims* the player has the opportunity to decide on physical, temperamental and psychological features of a Sim and moreover he is allowed to choose within a broad range of possible actions. Such a variable, which we suggest to call the *interactive gradient* of a digital prosthesis, can play an important role in the projection of the player into the game world, even though other variables (such as the point-of-view and the relation between player movements and character movements) may create a distance between the player and the avatar.

In addition, the issue of the prosthesis characterization cannot be tackled regardless of *the way the player controls his avatar*. Indeed, abstract images may become digital prostheses too, projecting the player into the game world. As Wolf has underlined “Abstraction (...) can become an aid to identification, rather than something that alienates” (2003, p. 52). For example Pac-man, which is only a yellow circle with a wedge-shaped gap, becomes a digital prosthesis since there is a *mapping* between the player’s hand movements and the character’s movements: indeed the game controller *translates in real time* the player’s motions to character’s motions; moreover such a translation is not totally arbitrary but it is motivated by a mapping between some topological features of the two movements. In such a perspective, player’s surrogates can be constructed “*interactively* through the game interface and the coordinated onscreen action under the player’s control” (Wolf 2003, p. 50). Furthermore, different game interfaces affect differently the identification of the player, depending on the degree to which



Fig. 3 – Wii Sports © Nintendo

the game interface itself offers both immersive and interactive potential.

A clarifying example is “Wii Sports” (Fig. 3): even though the player-surrogates are very stylized, the multi-dimensional mapping between the player’s body movements and the avatar’s movements projects the player into the game world in a very immersive way. In fact, thanks to the Wii remote, the translation between the player’s movements and the avatar’s movements is much more pregnant with meaning than the one allowed by other interfaces (mouse, joystick, joypad). Indeed, such a translation *maps* much more variables of the player’s body movements and creates a stronger analogy between player’s body and character’s body. The Wii remote (in conjunction with the Sensor Bar) is able to perceive the direction of the player’s movement, the power of his/her gesture, as well as the position of the controller in the 3-D space. Since the machine is capable of perceiving a wide range of body movement features, the immersive potential of the game controller increases.

Indeed, in several games expressly designed for the Nintendo Wii, the player’s body movement is so much similar to the one performed by the character, that it seems that the player is really performing the action simulated in the game. For example, in *WiiSports Bowling*, the player must perform this sequence of moves: 1) keep pushing the button on the back side of the remote, 2) move his arm behind his back, remaining in front of the screen, 3) push his arm towards the pins visualized onscreen 4) stop pushing the button in order to throw the bowl. The whole gesture performed by the WiiSports player is very similar to the one performed by a ‘real’ bowling player¹⁴. This similarity creates a deep immersion: the player is called to live through the body

an *experience* similar to the one experienced by a bowling player.

Moreover, in order to identify the several semiotic elements involved in the player’s projection into the game world, it is necessary to take into account also enunciative traces not specific to digital media. As we have already underlined (§1), the videloludic medium ‘re-uses’ several semiotic elements traditionally used in other media to simulate the act of enunciation into the text, such as verbal shifters¹⁵ (like ‘I’, ‘you’, ‘here’, ‘now’), visual perspective and point-of-view. Sometimes, in computer games the use of these enunciative elements operates indirectly in the player’s identification process: for example in the dialogue windows of *The Sims*, the avatar is repeatedly designed as a ‘you’, so that an overlap between player and avatar is established. In other cases, enunciative traces typically used in other media (like shot and point-of-view) may become out-and-out digital prostheses when they are used in computer games. For example, in a movie a subjective shot is a peculiar point of view that creates an overlapping between the character (‘he’) and the enunciatee (‘you’). The same type of shot in a computer game, like a FPS, becomes an out-and-out prosthesis because it is the player that controls the movement of the character’s gaze, moving at the same time his eyes in a way analogue to the avatar’s one. So, a simulacral element becomes a mask-prosthesis and it can play a crucial role in projecting the player into the game world.

In fact, as several scholars have underlined, the point-of-view in a computer game is one of the most important elements that affect the sense of *presence* in the game world¹⁶: certainly, seeing with the eyes of a character projects the player into the game world in a more im-



Fig. 4 – The Sims 2 © EA

mersive way than seeing the game world from an external point of view. In any case, we would restate that it is necessary take into account the relationship between a player's movements and the simulacra's movements, even when we analyse perspectives and points-of-view. For example, in god games (Fig. 4) the world is represented from an external point-of-view, but the player can control it, moving the cursor towards the border of the screen. In this way the point-of-view in the screen moves in the same direction than the player's hand and eyes. So that, in computer games even an external point-of-view (called "unreal objective shot" by Casetti 1986) can become a sort of mask-prosthesis, which the player can wear to enter into the game world.

4. Conclusions

Considering that *performance* plays a crucial role in the act of playing a computer game, we have suggested that, in order to use a semiotic approach to study computer games, we need to rethink the concepts of 'text' and 'enunciation'. Firstly, we have suggested to consider computer games as peculiar texts that are able to generate practices and experiences, fully meaningful only for someone who performs and lives them in first person. Secondly, we have proposed that in computer games the analysis of enunciation cannot be limited only to simu-

lacr elements but it should also take into account the complex relationships between the 'embodied player' and his several simulacra and prostheses. Indeed, both simulacral and embodied enunciation come into action in computer games. Finally, we have suggested some important elements to be taken into account for the analysis of enunciation in computer games (point-of-view, verbal shifters and digital prostheses). In addition, we have tried to identify those variables that may affect the way in which the player is projected into a game world (the degree of characterization and personalization of a prosthesis, and the relationship between a player's body movements and his surrogates' movement). In conclusion, we would clarify that these several variables come into action in a peculiar way in each computer game. For instance, in a lot of computer games there is more than one type of prostheses simultaneously, such as in some god games, in which we can recognize a transparent-prosthesis (the cursor), a mask-prosthesis (the point-of-view on the game world, which the player can control) and several character-prostheses (the avatars, in which the player can 'embody' himself). So, in order to elucidate the complex relations that a single game or genre establishes, it is necessary to conduct a deeper study of a well-defined corpus for analysis. We hope that this essay will provide some useful suggestions and operative tools for such a purpose.

Notes

¹ About the idea of videogames as artefacts, see Bogost (2006). The author encourages “the use of criticism as a tool for understanding how videogames function as cultural artefacts, and how they do so along with other modes of human expression” (Bogost 2006, p. xii).

² Gabriele Ferri and Otto Lehto also discuss the textual nature of computer games in their contributions to this volume.

³ In this perspective, any text cannot be considered complete and defined before an interpretation process. Semiotics makes us aware that texts are always open and incomplete (even though in different ways and degrees): as Eco (1979) has highlighted, the reader of a text is an active agent in the construction of the text itself, invited into a process of interpretative cooperation.

⁴ “In progression games, the player has to perform a predefined set of actions in order to complete the game” (Juul 2005, p. 5). The best example of a progression game is the traditional adventure game. This kind of games are characterized by a stronger control of game designer and by a more relevance of narrative and fictional aspect of the game.

⁵ Greimas & Courtés 1986.

⁶ In Bolter & Grusin (1999), the term ‘remediation’ refers to the re-presentation of old media in new media. They argue that all media works constantly borrow, reference, steal, appropriate and re-use both content and form derived from other works and from other media.

⁷ “Ergodic literature” refers to texts that require a reader to make a different or greater than normal effort. This is usually because they are non-linear in some way, which theoreticians relate to the possibilities of hypertext.

⁸ We use the term ‘practice’ to refer to a meaningful activity, a structured set of actions that involves a simultaneous use of multiple semiotic resources by participants. In addition, the term ‘practice’ involves the idea of learning. As Juul undelins: “Playing a game is an activity of improving skills (...), and playing a game is therefore fundamentally a learning experience” (Juul 2005, p. 5).

⁹ For a close examination of enunciation theory, see Manetti 1998.

¹⁰ The game-play distinction has taken on different meanings: sometimes it has been used to distinguish ludic activities depending on their degree of formality and structuration; some other times the distinction refers to two different modes of existence (systemic vs processual). In this work, we opt for the second meaning of the game-play distinction.

¹¹ Comparing our model to Aarseth’s user functions (Aarseth 1997), we could say that the player takes the role of enunciator even when he/she is called to decide which path to take (explorative function) and when he/she is called to choose or create scriptons (configurative function). Instead, when the user permanently adds or changes textons to the text (textonic function), he/she takes the role of co-creator of the game, because he/she is engaged in the “first enunciation”, instead of in the “second enunciation”.

¹² Although these considerations are generally valid for all computer games, for analyses it is necessary to make distinctions. Indeed, in different games one or the other role becomes more or less relevant to the player.

¹³ With this, we do not intend to reject a semiotic principle,

which postulates to abstract from the real subjects of enunciation. Here, we intend the ‘player’ as an implied player, that does not coincide with the real person who is really playing. Nevertheless, at the same time, we do not consider the ‘player’ as a merely logical instance, but as an ‘embodied’ player that moves his body and eyes in the way requested by the game.

¹⁴ See <http://uk.wii.com/movies/08/>.

¹⁵ For Jakobson (1957), a shifter is a term whose meaning cannot be determined without referring to the message that is being communicated between a sender and a receiver. For example the pronouns ‘I’ and ‘you’, as well as words like ‘here’ and ‘now’, and the tenses, are shifters because they can only be fully understood by reference to the context in which they are uttered.

¹⁶ For an examination of the relationships between point-of-view and immersion in video games, see in particular Taylor (2002).

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