

To be AND not to be, that is the Quest Ontology of rules in computer-based games

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Intro

According to David Myers «games, like literature, use conventional signs and symbols in unconventional ways»¹. We know that literature, unlike painting, is explicit in its content; games, however, are both explicit and non-explicit in their content, so their distinct quality must be sought elsewhere. Some Game Studies authors argue that games, unlike other *media*, by means of rules always are explicit, using rules, relating the way how to interface with them.

Nevertheless not all games have rules, but all games have some forms of interaction. This, though, is also the case in literature, as Wolfgang Iser and the Constance School have shown: the reader always interacts with meanings of a literary work. Surely, Iser's symbolic interaction is present in games, but there is also a material interaction with the structural elements in this *media*. Then what is more important in the game structure: rules, interaction or something else?

In order to answer this question I propose to include in the Games Studies debate some of the theoretical tools available in John Searle's Social Ontology Project, which has not yet been employed in this context, and which appear to be useful in this context, especially in relation to the question of «rules».

Social Ontology Project

In hundreds of articles on game studies, I encountered only one time the Social Ontology Project of John Searle², maybe/who perhaps represent the most important philosophical approach to analyze/the analysis of games. Social Ontology deals with objects that exist only inasmuch people believe in them. These objects are not reducible to mere thoughts, because, once generated, they cannot be amended they are not amendable by the single subject. The value of a bill, e.g., depends on subjective belief, nevertheless the single subject cannot modify its value. Searle describes the logical form of this *status-function assignation*:

«X (physical object) counts as Y (status-function) in C (context)»³

Example: «this piece of paper counts as banknote in an exchange».

Social ontologists think that games are models of social objects. We can surely/definitely say that social objects are the model/prototype of games: by using a status-function it is possible to count a X-broom as a Y-horse in the C-game. After the game, the Y-horse returns to being a X-broom.

Identity, a sort of linguistic *doppelganger* of entity, is the most important *status-function* of social reality. In a ludic world identities overlap, double and split in many ways: the personal status-function «John», in a ludic context like a MMORPG, overlaps with character status-function «Argramar the Orc».

Searle, referring to Rawls, Znamierowski and Reinach, links the *status-function* to language, explaining its functioning in terms of «constitutive rules», *i.e.* rules that precede the object they

¹ Myers 2006: 47

² Searle 1995, Searle 2010

³ Some theorists used different formulas and Searle recently changed his own, but this one is the most important formula.

regulate (unlike “regulative rules”, which follow it). Social Objects such as money, games, weddings, private property, and state laws are generated by constitutive rules.

What is a rule?

Learning an activity often occurs by conformity to some rules (e.g. instructions «how to kiss»), but this does not mean that this activity consists in compliance with rules. Although it could be *described* as a regulated activity, kissing is not this at all. Similarly, to rip a blade of grass does not need to follow rules, it is enough to know how to use fingers. Just as to play *Second Life*⁴.

The relation between games and rules is one of the most quoted but least studied of the Game Studies. One way to approach this theme is by looking at the patents of games. Many games have a registered trademark and these rights are protected in various ways. But if it is possible to patent a game, it is not possible to patent a rule or a mechanic type (e.g. the First Person Shooter mechanic); what is patentable are only the technical means to play, like hardware or software configurations, because rules depend on the subject to exist and the intentional states are not patentable as if they were objects.

Therefore we cannot consider rules as objects, but rather as status functions assigned to linguistic elements that depend on intentional states linked to belief. A subject follows a rule if he believes that a certain action should be done. Despite this it is a matter of «ought» rather than «is»: the subject could believe that the rule is an object in itself, but this does not transform the rule into an object, like to believe in Zeus does not lead/mean he/cause him to exist (except for who believes/believers). Then objects of belief exist only inside the mind states/mind/as states of mind of a subject. They/Subjects can either hold a referent into the external reality, or not. If they hold a referent (into external reality) then they are true beliefs/then their belief is true, otherwise they are false beliefs/it is false.

A particular type of intentional state related to game/games is the fictive one/type. A make-believe does not require any belief, indeed it requires his contrary/its contradiction, a disbelief:

Social object: belief

VS

Fictive object: disbelief

When he/it makes-believe, the subject does not believe to/in the objectivity of the status functions that he assigns/it assigns to the object, which is then/: the status function is then «intransitive». In this way we can then distinguish:

Status Function: transitivity

VS

Status Fiction: intransitivity

According to Searle, social objects depend on language. Ludwig Wittgenstein considers the language as a network of different and often incompatible linguistic games. These linguistic games are the base of social objects and then/as such they certainly share something with games in proper sense. However not all social objects are properly/(delete properly otherwise proper) games, so the gameness of a game cannot consist in being/cannot be defined as a social object⁵.

The Social Ontology Project was not projected to investigate (just) games, but it is useful to understand that the *differance* between a status *function* (believed as objective) and a status *fiction* (not really-believed as objective) lies in the subject's perception. The self-reference of the subject is

⁴ Linden Lab 2003

⁵ And for sure the entire social reality cannot be considered as a game.

the main process of the make-believe and the game that it can generate. As Tavinor says, «modern videogames are fiction machines»⁶.

Games anyway are not only fiction, because they involve interaction too: a process of actions and feedbacks between player and player, but primarily between player and game. The manipulation performed by the player then does not arise only to the level of meanings but also and specially to the material level. Then we can see that the ludic dimension is an «Explicit Interactive Figment»: making explicit the fiction differs from lying.

Subject-related objects

Yet Brenda Laurel⁷ and Janet Murray⁸ stressed the centrality of the subject in the game structure. The so-called zero-player games, like the self-reproducing fractals algorithm named *The Game of Life*⁹, contain nothing ludic. The prisoner's dilemma, outside of a simulation, is not ludic, but a painful torture. Laurel considers the subject as central because of interaction, whereas Murray considers the subject as central because of interpretation (regarding to fiction). The player is aware of his direct and total power on fictive statuses that constitute his ludic world: this awareness divides the status *fiction* of game acts from the status *function* of serious social acts. Therefore a computer-based game is a game if and only if the player intends it as a game: when I was working at Nintendo as tester, I was playing only on the very first day of a new project, after that it was just work.

Shifting attention toward the subject is necessary because from the phenomenology emerges a datum: as Wittgenstein detected¹⁰, there are not intrinsic and shared properties for all games. The player is always at the center of the game, even where he has a role separated from the events plan or where he moves *avatars* that do not represent himself, like in chess, Real Time Strategy games or God games.

The game, to be such, must be a user-created system. To create such a system, some means are more suitable than others, though the key is not the syntactic of means, but the modality used by the player to interfacing with such means. What is ludic and what is not is more a matter of culture or psychology, than of gaming devices. For example, before encountering it I never thought that a tram simulator could be a game, especially if in this simulator I do not have the role of the driver. In the *passenger mode* the only entertainment consists in seeing if the virtual model of my tram stop is realistic, with the little choice to get off the tram stop after this. Nevertheless this everyday epic in Japan is considered ludic and it is a prolific genre from decades¹¹. There are those who play with puppets, and those who play with Russian roulette, those who play alone, and those who play with others, those who play challenging the best chess AI, and those who play simply by clicking on the «I'm feeling lucky» Google button. It is hard to detect something that all these activities share, because they depend on the intentionality of the subject. Also according to Consalvo¹² the player is central to understanding games, as well as according to Galloway: «both the machine and the operator work together in a cybernetic relationship» to constitute the game¹³.

A sort of Copernican revolution in Game Studies could be made by concentrating more upon the subject than upon the object, or better looking at the encounter of subject and object. Galileo

⁶ Tavinor 2009a: 94

⁷ Laurel 1991:117

⁸ Murray 1998:126

⁹ Gardner 1970

¹⁰ Wittgenstein 1953

¹¹ Real Railway 2011

¹² Consalvo 2007: 2

¹³ Galloway 2006: 5

Galilei had found that objects have two types of properties¹⁴: primary properties (as mass or measures) are the characteristics of the objects with relation to other objects, secondary properties (as colour or taste) are the characteristics of the objects with relation to the subjects. Games properties are secondary properties because they derive from the encounter of object and subject. Today we do not use the notion of «secondary» or «primary property», but the similar notion of «affordance», introduced by James Gibson to identify a property that an object has only in relation to another specific object¹⁵.

During a private discussion on this theme, John Richard Sageng objected to me that any artifact exhibits a sort of dependency from/upon the subject: *e.g.* a stamps depend «on beliefs, intentions and usage of their makers. Despite this sort of dependency, it still makes sense to treat stamps as objects or as having objective properties (made in China, worth 5 cent, second edition, pre-civil war etc) and being objects rather than mental states». The sharp objection of Sageng pinpointed the problem: what I am trying to examine is connected to the secondary properties of artifacts which depend upon the subject. Colors depend upon my eyes, and «made in China», «counting as 5 cents», «pre-civil war period», as Searle says, are all institutional facts that depend on/upon my subjective beliefs.

Gregory Bateson considers the game not as an activity, but as a communication frame, a negative meta-message¹⁶. According to Bateson, playing is «to represent the representation of an X» without representing the X. The negation is then the basis of the game, which is at its turn the basis of the entire language. From a primary and believed description of reality («X is not Y») follows a secondary and ludic make-believe («X is not X»), which then is followed by a tertiary and linguistic symbolization («X is Y»).

If looking for a presence of the «ought» prescription we do not encounter it. Searle clarifies that the «ought» prescription emerges only in a fourth phase, where the «X is Y», hiding a «X ought be Y», generates an institution¹⁷. So we can see that prescriptions are not at the center of ludic purposes or structures. According to Bateson, the ludic-linguistic frame distinguishes the Y-symbol from the X-thing: because of this the schizophrenic, who does not distinguish the sign from the referent, is always serious and he never plays, even when he uses the ludic style of communication.

It is then possible to distinguish an ontological approach according to which the game (G) is an object («X counts as G in C»), and a modal approach according to which the game (G) is a frame («X counts as Y in G»). In this second approach the game is a mode that can be applied to any object. In fact what is a game in one community maybe is not necessarily a game in another.

Following the modal approach, Vossen divides «Play» as a mode of ludic make-believe from «Game» as a rule-based object¹⁸. According to Vossen there are two main theories: the first theory sees «Game» as a result of a blurred and vague ontological continuum that starts from «Play», the second theory sees an ontological jump from «Play» to «Game» normally ascribable to rules. Searle could be integrated in this second theory group, because he considers constitutive rules as the cause of the entire social reality. The problem with this theory group is that there are a lot of «Games» that are not governed by rules, *e.g.* computer-based games (where videogames with screen are the most widespread type).

Typical mistakes

There are a lot of statements that hypostatize a relation between rules and computer-based games where there is not such a hypostatized relation. Miguel Sicart says that «the semantic level

¹⁴ Galilei 1623

¹⁵ Gibson 1979

¹⁶ Bateson 1955, Bateson 1956

¹⁷ Searle 2010

¹⁸ Vossen 2004

communicates rules by means of metaphors»¹⁹. Patricia Greenfield says that the difference between traditional games and computer-based games is that in computer games the rules are not stated before starting, they have to be discovered by playing²⁰. Jesper Juul says that «rules specify limitations and affordances. They prohibit players from performing actions (...) but they also add meaning to the allowed actions and this affords players meaningful actions that were not otherwise available; rules give games structure»²¹. Greg Lastowka says that EULAs are game booklets and that «the rules of World of Warcraft are not all that different from the rules that govern gridiron, the golf course, the baseball field and the game board»²². John Richard Sageng says that «games often rely on combination of rule-governed action and representation. The role computing in computer games is to *facilitate* or *stand in* for rules for action»²³. Fernandez Vara says that «rules are enforced by the code of the program(s) that make the game»²⁴, and moreover «the game mechanics are a subset of the overall game rules (...) that are followed by the computer as performer, whereas the game mechanics are the ones available to the player as performer»²⁵. Many authors link rules to constraints in the same way they link rules to simulation. And often they assign to the program code the notion of «rules system».

Rereading with this perspective the major and minor Game Studies authors, even those which specifically deal with rules, such as Salen and Zimmermann, we can find that they lack a fundamental differentiation amongst program code, screen and interface *affordances*, regulative rules, constitutive rules, prescriptive rules and descriptive rules. In that way their theories and explanations are not satisfactory not only for the theorists but for the industry too, that in fact uses naïf but useful categories (like those of Bartle) instead of sophisticated but useless theories.

For example Sicart mixes regulative rules (which follow the action) with constitutive rules (which precede the action) saying that game mechanics are concerned with the actual interaction with the game state, while rules provide the possibility space where that interaction is possible, regulating as well the transition between states. In this sense, for Sicart rules are modeled after agency, while mechanics are modeled for agency.

Despite the confusion in game studies, deontic logic studied by Georg Henrik Von Wright and Antonio Conte²⁶ affirms that descriptive rules use normativity to communicate to a subject «how an object works in a system». Prescriptive rules instead prescribe a behavior to a subject that, *qua* not modally being forced to obey, can choose to respond to the rule or not.

As stated by Rawls²⁷, an instruction manual or a recipe cookbook directed to hand down a knowledge or a technique can formalize in a rule system an activity not governed by rules as kissing or cooking the pizza. The descriptive rules of a recipe are produced by observational induction from a state of things. The prescriptive rules instead are always and only imposed by the subject to himself and they cannot derive from the observation of a state of things, as well as it is not possible to make an induction of «ought» from «being». By reference to Hume²⁸, the «is» is related to world while the «ought» is related to subject, so prescriptive rules are always and only related to subjective intentionality. No stone obey to rules and no computer obey to rules. We cannot go astray by expressions as «physics laws», because they have a purpose only descriptive and not prescriptive, since that to obey to a prescriptive rule it is necessary to own the freedom to do not, a faculty that natural entities do not own.

¹⁹ Sicart 2009

²⁰ Greenfield 1984

²¹ Juul 2005: 58

²² Lastowka 2009: 16

²³ Sageng 2009: 2

²⁴ Fernandez Vara 2009: 63

²⁵ Fernandez Vara 2009: 93-94

²⁶ Conte 1985

²⁷ Rawls 1955

²⁸ Hume 1739

In the large the rules are not objects (except into the belief) and they have not a causal power without a mediation of the subject. They are used by Science as methods to describe regular phenomena useful for the forecast of future events, but they are not used by Science to build a theoretical conclusion. Any explanation that poses rules as causes, explains nothing.

Non-player character

We have to understand that, whereas objects like stones and computers cannot obey to rules, subjects can obey to rules only if they know them in an explicit way. As well as a subject can make a choice only with awareness, he can obey or disobey to a prescriptive rule only if he has awareness of that prescription. Similarly, it is not possible to play without knowing to do it.

Involuntary players do not exist: for this reason Role Playing Games call them NPC (non-player characters). The instructions given to computer are not rules, neither for the computer nor for the user. A computer cannot disobey to those instructions, therefore it cannot intend them as rules for its «behaviour». Into the famous chess challenge between the human champion Kasparov and the supercomputer *Deep Blue*, this one did not playing, nor it could cheat somehow. Only a philosophical and *superscientific* computer that during data processing uses a semantic level could play to a game in the way that a human can play, i.e. assigning meaning to means. A normal computer instead is an entity unable to intend and incapable to consent, not *by law* but *by fact*. The instructions given to it by the programmer operate like any other brute fact, i.e. mechanically and deterministically by cause and effects. Coercitive obligations imposed by the program instructions to the computer are then at the same level of the obligation that a stone has to roll down the ground: these are not prescriptive rules, but rather describable regularities.

The player plays only if he is thinking that he is playing. Play is a subjective activity: an intentional state. It is not possible to discover that you are playing or that you are not playing: you only can change your opinion about that but not discovering something about that. So you change your intentional state because you think that it is not possible to play in the situation that you discovered, but no one can demonstrate to you that you are playing or not playing *against* your actual opinion. In *The Game* movie²⁹ the protagonist at the end does not discover that he was playing, but he discovers that the other people that he encountered during the movie were playing and they were not serious.

So game has not objective properties in itself, but only a wide variety of conceptions in a variety of anthropological and psychological view. Ontology it's here to demonstrate that fact.

Magic issues

Not all games have rules and games with rules need to be played: they do not consist only in rules, otherwise the Law of State would be a game. Anyway, in many boardgames, sports, role-playing, traditional and improvised games, the prescriptive rules have the role to constitute the ludical activity. Conversely, in computer-based games it is hard to detect some prescriptive rules directed to constrain player's behaviour. Unlike what occurs in a tabletop game such as *Monopoly* or *Warhammer*, in a computer-based game players do not obey to rules. *A fortiori* players do not prescribe rules to make characters acting, such as Mario's jumping over a wall.

There are instead concrete (neither linguistic nor symbolic) relations among objects on screen and the subject that is playing. From this point of view, screen entities have the same ontological status of software and hardware bounds: they exist regardless the subject who use them. Unlike rules or (fictive) identities, which are social objects, screen entities such as Mario sprite and its platforms, are physical objects. The player has to interact with them (Mario's platforms and walls)

²⁹ Fincher 1997

like he interacts with physical entities (home's platforms and walls). A completely different situation is to interact with a State frontier that, like a proprietary right or a *Monopoly* mechanic, is governed by rules.

Even in the case where they share the same purpose (e.g. do not leave people trespassing), a wall and a rule written on the near roadsign operate in very different ways. The obligation imposed by a rule written on a roadsign exists only if subjects concede a validity to that rule; instead the wall does not need human consensus to make impassable a boundary. Virtual objects of computer-based games exist even if the subject does not grant his consensus, exactly like material artifacts. A virtual wall is in that sense equal to a concrete wall: they are not social objects, but brute facts.

Obviously the on screen entities depend on instructions given by the programmer to the machine. These instructions have a structure that is apparently linguistic, they seem rules, but they are not: the calculator cannot disobey to them and it cannot even understand them³⁰. Thus on screen entities are not a graphic representation of rules, but just objects.

Anyhow these are just theoretical discussions: we need to look at concrete cases. Only few computer-based games use rules with ludic purposes, and normally these are boardgames transpositions. Consider *Magic the Gathering*, the cardgame³¹: the official computer-based version, named *Magic Online*, has the feature to enforce in automatic mode the effects written on cards (e.g. the power to «inflict three damages to a creature»)³². Therefore, the card is a description of an objective affordance, not a rule prescription. Conversely, the unofficial electronic version of that game, named *Magic Workstation*, requires the player manually to enforce card effects, with the risk to not doing it in the way that rules prescribe³³. Here opponents has to monitor each operation, because errors and cheating are possible. By realizing this fact designers could discover a new continent of game types. Rule-based games have maybe to be implemented in new horizons of gaming, because to date they are not.

Why would you to reduce computer games, that apparently are games that do not use rules, to rule-governed games? In the same way we could reduce Lego or Barbie games to rule-governed games. Already eight hundred years ago, Ockham, the father of science, said that «entia non sunt multiplicanda praeter necessitatem».

The concept of rule is not in itself explanatory. In conformity with Tavinor «a great many things that are not games can be seen as algorithms»³⁴. To find an explanation it needs to look at the interpretation of the algorithm. Tavinor refers to affordances and to rules as linguistic declarations: both preexist to player agency and affect it, but in a different way. Affordances are relational and objective properties, while rules are deontic powers that the subject assigns to some status functions. Juul extends the concept of rule to the affordances, because both are goal-oriented³⁵. But if you want to create a game where feet are not used to control the ball, you can make it in two ways: by prescribing a rule that *prohibits* to use feet (like in handball), or you can do it by building an affordance that *inhibits* to use feet (like in rugby). By reference to Juul the affordance of the rugby ball would be a material rule that prohibit to control the ball using feet. Though the handball rule is very different from the rugby affordance, because of their different effects on the game development and because of their different ontological structure. Indeed a rule exists only inasmuch conceived, the affordance exists even if not conceived.

Virtual objects are not rules, but affordances. Designer and programmer do not prescribe rules neither to computer nor to player. They just create affordances which to play or not.

³⁰ Searle 1980

³¹ Garfield 1993

³² Leaping Lizard Software 2002

³³ Magi-Soft Development 2002

³⁴ Tavinor 2009b: 90

³⁵ Juul 2005: 36-43

We do not need a Virtual concept

We saw that we do not need rules to use artifacts like brooms or computers, because we only need to exploit the intrinsic properties of those objects. To move Mario on screen and make him to jump over a virtual wall we do not need a rule, it is enough to push the button. Knowing which button is not a rule, rather a simple knowledge.

Dealing with this issue, Brey considers that virtual entities are neither physical nor fictive, but just manageable³⁶. But this fact does not really distinguish virtual entities from physical entities. That issue introduces a typical misunderstanding of early Game Studies, that in part reverberated until today. The so-called «virtual» entities own a physical existence, moreover we produced during the years a lot of names for them: sprites, polygons, parallax, etc ... In this sense a *virtual* wall is a *real* wall.

The division of world in real and virtual seems a *borgesian* division between real world and Marvel comics world, that is also different from Disney comics world and Ronald McDonald world. If we would be obliged to identify more than a world, those are the *external* and the *internal* to mind. All the properties of a virtual world are physical or psychic, or rather semiotic. Thus from the ontological point of view there are not virtual realities.

In agreement with Lehdonvirta, I argue that there are no «virtual worlds» that achieve their form or the effect of the real world³⁷. There is just one reality, composed by many regional niches, some physical, other psychic, other social. The issue of virtuality has neither an ontological weight nor an existential one. Moreover, the notion of «virtual world» or «cyberspace» used by authors like Heim³⁸ or Koepsell³⁹ does not concern a totality (the central concept when we are talking about reality as Heidegger, Fink or Axelos do), but just a contextuality⁴⁰. So the *virtual* is not a world, but rather a context. The difference is that a world is closed in itself, while a context is instead linked to others contexts. So we have not to talk about just one Cyberspace, but rather about a plurality of Cyberplaces, constituted by objective affordances and subjective social objects.

A particular type of virtual objects seems to give some problems to theorists: virtual copies of real objects. We can see that they are objects with a semiotic meaning, Pearce's iconic signs⁴¹ based on the affordances of their shape: they represent an object in force of their analogical and objective resemblance. Completely a different case of status function assignation that the subject can give to virtual reproductions of objects which are assigned as fictive properties. This one is a secondary level status, assigned by the intentional state of make-believe.

Ergodic toys

Just few computer-based games use rules, but all of them use affordances: they hold an «ergodic» property⁴², typical of tools more than of texts. The computer-based games, like rocking horses, Lego and Barbie, are ergodic toys because they carry with them some coordinates of their ludic usage. Like any tool, a broom owns an ergodic property that leads the user to exploit it to clean the floor: but its affordances allow to use it also as an horse (in a ludic way) although these affordances do not ask in an explicit way to play with them. The typical ergodic property of computer-based games lead us to make-believe and to interact. Not all the *media* own ergodic properties leading to make-believe or to interaction: for example daily newspapers lead us to a serious interpretation, instead tools and non-completely automatic machines lead us to interact.

³⁶ Brey 2003: 5

³⁷ Lehdonvirta 2009

³⁸ Heim 1993, Heim 1998

³⁹ Koepsell 2000: 40

⁴⁰ Heidegger 1929, Fink 1956, Fink 1960, Axelos 1974

⁴¹ Peirce 1906

⁴² Term inspired by Aarseth, but used differently.

The ergodic structures of computer-based game exclude some possibilities offered by traditional games. For example Costikyan⁴³ shows that if you play with an Artificial Intelligence you cannot play the role of a character as in a traditional Role Playing Game. The AI requires to interact by preset interfaces and to act following fixed schemes. *E.g.* the Xbox 360 Kinect interface *acknowledge* the movements of the player, but it cannot *interpret* as a person could do: there is a huge cognitive difference between to acknowledge and to interpret.

Different models of interaction between player and computer-based game lead to structure the game in different ways. There are games, like Tetris, that appear as an ensemble of objects to manipulate directly and simply. There are games, like Pac-Man or Doom, that appear as representations of worlds inhabited by *avatars* of the player. There are finally games, like SimCity or Civilization, that appear as ensemble of objects to manipulate indirectly and in a complicated way that depends by the player's representation. The identification of the player with an entity on screen is never detectable in the first type of game (really useful to familiarize with new systems and interface), relevant in the second type of game and rare in the third (normally addressed to expert players). As well as in chess⁴⁴, in computer-based games too the expert and beginner player do not feel identification as the average player, who indeed prefer games with an *avatar* that could be used as intermediary of identity. So the identity seems to be a central element of mid-term marche: in a lot of games we can recognize three different levels of player's identification as the game progresses (*e.g.* Will Wright's *Spore*).

In any case, despite computer-based games are ergodic toys, the player can change his usage of interfaces and affordances which are projected to be the ludic functions: the player can use less obvious affordances of the game to play in a different way (*e.g.* machinima) or to stop playing to do activities of other genre (*e.g.* working in Second Life).

We need to mind that the issue about affordances does not restrict the research field just to object properties. In any object there are many affordances, but we saw that not always they are all exploited by the user. The affordances of an object cannot force the subject to play with it: a broom can be used to clean as well as to play. Maybe any object or situation offers affordances such as to play with them or to act seriously with them. So the game does not totally depend by objective affordances and our interaction with toys and computer-based games can be ludic as not ludic.

We have to remember that game is a *mode*, an intentional state referred to an activity, an object or a context. As well as there are games that use physical affordances, like Lego and computer-based games, there are also games that use social affordances, like gambling, betting and all games based on promises. Even in that case, however, the affordances can be disregarded: players can cheat.

Bug or feature?

When I worked in Nintendo the main important question for tester coordinators was: this phenomenon is «a bug or a feature»? A bug should be corrected, a feature does not. That problem is not ontologically solvable, if anything taxonomically, because it is not possible to recognize an universal difference between a bug and a feature. This fact is tied to rules because of cheating: for example one of the problems of online games manager is to choose if to punish (or not) players that exploit bugs.

Like bug-exploiting, the many ways to cheat are very well discussed by Consalvo, even if some issues were not solved, like the fact that to play to lose or that reconfiguring the keyboard are not considered as cheatings. A phenomenon as cheating is not related to objective parameters. The reason is that it is not sufficient that you change a rule just for one occurrence (as exception) to feel that you are cheating, because cheating is related to lying to other players and to a «dirty» behaviour that is integrated in the game context (otherwise you do not feel to cheat but just to play another

⁴³ Costikyan1994

⁴⁴ Festini 1998

game of game, maybe a deregulative one – we will see after what does it means). The player's ideas are central in the cheating phenomenon too, that to be understood it should be referred to reasons that push the player to cheat, like not being able to act following the rules or not accepting to lose.

According to Juul, the main difference between games and computer-based games is that for the latter rules are not directed immediately to the player, being processed by the calculator⁴⁵. Thereby the player cannot crash the deontic power of the rules, because they are not directed to him. By this way, the player can cheat only by a *crack* of the program code. But we have to understand that the *cracking* is a material action on material bounds, not an intentional change of point of view.

Jørgensen wrote «in a classical game like chess, the moves of the pieces are defined beforehand, but it is up to the players to move according to the rules. In computer games, on the other hand, it is almost never possible to cheat as long as the game is thoroughly programmed»⁴⁶. Indeed cheat codes «cannot be seen as breaking the rules; it is rather a method to avoid the rules by going beyond them». So Jørgensen concludes that «in classical games a player normally needs to learn the rules, while in computer games the player does not need to learn any rules at all. One may say that computer game rules are invisible compared to rules of other games. The player does, however, need to learn the rules of the interface of any computer game, and while not the equivalent of traditional games' structural rules, the interface may be seen as a formal feature that needs to be learned before being able to play the game correctly. The interface then constrains the player in the sense that it defines what actions are possible within the game»⁴⁷. It is important to note that the way to constrain the player used by a machine affordance (as the limited engine of a car) is really different from the way used by a rule (as the speed limit of the Law). So as a machine (a computer, a car) cannot cheat, a player using that machine cannot cheat simply by referring to its affordances.

In this context we need to situate a recent issue of Game Studies. We normally talk about «emergent gameplay» based on rules, such as *cheating*, *exploiting*, *griefing*, *twinking* or *farming*, but we seen that computer-based games do not operate by rules, yet by deterministic events (related to the game as object) or by gibsonian affordances (related to the player as subject). Players have not to choose to obey to rules or not, but just to use the screen entities in one way or another.

What is interesting is that a cheating player assigns a status function of rule to something that is not prescriptive by itself. However emergent gameplays such as cheating, griefing, farming etc.. are based on social objects (rules) and not on physical objects (screen entities). Therefore designers that are producing games with emergent gameplay based on rules can operate only in two different ways. The first traditional way requests to look at the social ontology that the player holds before playing. Whereas in a normal computer-based game there are not rules to obey, the matter is the previous cultural perspective that tells to the player what is permitted and what is not. *E.g.* some players could make-believe that EULA or instruction booklets constitute the rulebook of the game, but other players could not. The second innovative way requests to insert rules in the core mechanics of the game (as in boardgames).

In any case we need to understand how the players relate to rules. The Social Ontology Project supports us to understand that there are four typologies of players regarding to rules: constitutive player, regulative player, de-regulative player and de-constitutive player.

Player types about rules

Normally computer-based games have no rules, but someone can play with it by following rules. For example there is a player type who thinks that he has to follow the spirit of the game, as it

⁴⁵ Juul 2005

⁴⁶ Jørgensen 2003: 44

⁴⁷ Jørgensen 2003: 45

was conceived by the author of the game, or as the *software license agreement* prescribes, or as it is seen by the community which plays it.

Apart the cheating phenomenon, there four main player types that relate to rules⁴⁸:

Regulative player:

A regulative game is build by giving a rule shape to a precedent play activity. A MMORPG group builder or a multiplayer tournament organizer are the typical player figures that give rules to something that is not regulated.

Constitutive player:

A constitutive game is a system of rules without them is not possible to play to a certain game. Players of games as *Magic Workstation* or other presents on the website *Brettspielwelt.de* or simple play-by-mail games are the typical constitutive players, but I hope to see a lot of new games based on rules that can be not respected. A certain type of *goldfarmer* is a constitutive player because he respects a rule-governed system of exchange inside the game. Finally the player that feels EULAs, program codes or normal ways to play as a sort of rules booklets of the game can be associated to a solitaire constitutive player.

Deregulative player:

A deregulative game is a transgressive one, where the center of the game is «do not obey» to certain rules. In normal computer-based games there are not prescriptive rules, but a constitutive player can create one based on EULAs, program codes and normal ways to play. So hackers and griefers are the main types of deregulative players, because they do not obey to this form of prescriptions.

Deconstitutive player:

A deconstitutive game deconstructs the deontic powers of the rules (e.g. jokes and satires). Normally computer-based games do not host deontic powers, but machinima making and a wide variety of trolling activities could be directed to deconstruct ideology and syntactic of games.

In that way is possible to see that normally computer-based games do not host rules, but when there are it is possible to recognize different typologies of players that relate to them. I think that all MMORPG can exploit this grill to build new forms of games and new mechanics.

Conclusions

A lot of theories explain the phenomenon of game linking it to rules:

- Constitutive theories: the game, by the rules, constitutes a new reality
- Regulative theories: the game, by the rules, give an order to the reality
- Deregulative theories: the game subtract order from the reality to give chaos instead
- Deconstitutive theories: the game deconstructs the deontic power of rules and society

But computer-based game theories continuously confuse descriptive rules used to build simulations, absent prescriptive rules and program code instructions, hampering the theoretical process. This paper could be in part conceived as a tool to go over the recent deadlock created by the debate between Bogost's proceduralism⁴⁹ and Sicart's antiproceduralism⁵⁰, where the latter criticizes the deterministic approach based on rules. By my dark side I think that Sicart has reason

⁴⁸ Mosca 2010

⁴⁹ Bogost 2006

⁵⁰ Sicart 2009

when he says that the rules in computer-based games are not a causal force and that the study of the subject should be enhanced. By my bright side I think instead that the Bogost's OOO approach (Object-Oriented Ontology) is really interesting, but if we want to look at rules and not just to affordances, we need the Searle's Social Ontology Project, that we could see as branch of OOO.

Looking widely to another, older, debate we can see that Narrativism has described the game as a text to interpret and Ludology as an autonomous formal system of rules (or affordances). Gonzalo Frasca (a ludologist) said that it there was no contrast between narrativism and ludology, subsuming narrativism in ludology⁵¹. Personally I think that the ghosting debate between Murray⁵² and Aarseth⁵³ was well synthesized by Juul when he said that games are objective things on a formal and algorithmic plane, whereas stories are subjective things on a interpreting plane⁵⁴. Another interesting point of view is that one of Jenkins, that has seen the game as a combination of narration and rules (that offer interaction)⁵⁵.

I think that these approaches are unsatisfactory because they undervalued the role of the subject relating to the contents. Juul thinks that the ludology consists to support the idea that games should be understood on their own terms. Ludologists as Juul have proposed that the study of games should concern the analysis of the abstract and formal systems they describe. In other words, the focus of game studies should be on the rules of a game, not on the representational elements which are only incidental. Agreeing with Juul, Aarseth thinks that dimensions of Lara Croft's body, already analyzed to death by film theorists, are irrelevant to players, because a different-looking body would not make them play differently: a player, according to Aarseth, does not even see her body, but he sees through it and past it. Following this I could argue that Mario's 2D sprite could be put into Tomb Raider without any problems for players.

By my (dark and bright together) side I think that these types of statements are really shocking as to say that the study of literature should be only semiotic and not semantic. Taken literally, these theories would produce only avant-garde or Mannerist designs and works with no interest to contents, emotions and values: simply with no interest to produce games that could have a reason to be played.

In any case I think to have shown that if we want to analyze games not as texts, we cannot lead us to analyze rule systems, because normally there are no rules in computer-based games. To play a game has no other purposes that to play: it is contemplation, not only usage. Therefore the semantic level is really important, at least how much it is in the music, where it consists mainly by emotions, that are intentional states as the ludic ones.

Game Studies lack a sort of hermeneutics, an Aesthetics of semantic level, a critics who could make explicit the meanings and not only the syntactical structures. To do this it is necessary to build a corpus of games could be easy found and played. Without libraries there are not literary schools, without churches full of frescos there were not painters' communities, without museums we would have neither Winckelmann nor Schiller, without *essai cineforum* we would have neither Bazin nor the *nouvelle vague*. A big problem of computer-based games it is their availability: machines evolve too much speedy, the titles lose their appeal on the market in a while and there is not a simple way to try all the most important games of history.

This is a real problem, because videogames are the best model of the contemporary culture, that combines materialism and images worship: the videogamer interact with the material and symbolic level of images, recapitulating the characteristics of our culture. To analyze videogames is then a broad intellectual priority, not just an industry mean. So there are a lot of different theories: the debate directly fits in the generation of culture and politics. Because of this it is important to produce and to accept always new theories.

⁵¹ Frasca 2003

⁵² Murray 1998

⁵³ Aarseth 2000

⁵⁴ Juul 2005

⁵⁵ Jenkins 2010

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