Videogames of the Oppressed: critical thinking, education, tolerance and other trivial issues.

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Is it possible to design videogames that deal with social and political issues? Could videogames be used as a tool for encouraging critical thinking? Do videogames offer an alternative way of understanding and dealing with reality? While videogames are now about three decades old, these questions remain unanswered. It seems that even if the medium has reached an incredible popularity, it is still far away from becoming an artistic communicational form that could deal with such things as human relationships, political and social issues. The main question that needs to be answered is if it makes sense to pretend that videogames could deal with those subjects at all. After all, some may say, they are just games. And games have been considered as trivial entertainment for ages. Nevertheless, there are many examples in media history of formats that have gained respect through time. Comic books are a clear example of this. Just like videogames, they were thought to be a violent, trivial medium for children and teenagers. However, comic books have gained recognition as a "serious" medium, as Art Spiegelman's Pulitzer-Prize-winning "Maus" proves it. Obviously, videogames are not comic books. In this article, I explore the possibilities of non-Aristotelian game design, mainly based on the work of drama theorist Augusto Boal.

Simulation and Representation

The design of consciousness-raising videogames is not as simple as replacing Nintendo's Mario and Luigi with Sacco and Vanzetti. According to Brenda Laurel's now classic *Computers as Theater*, computer software and videogames can be understood through the same rules that Aristotle described on his *Poetics*. The "interactive drama/storytelling/narrative" paradigm has been the leading design textbook in most current videogame design, supported both by such theorists as Laurel and Janet Murray and by the videogame industry, which runs on parallel tracks with Hollywood. It seems that the current tendency is to explain computer (and videogames) as an extension of a previously existent medium (Laurel did it with drama, Murray with storytelling and, more recently, Lev Manovich based his approach on film studies). The main advantage of these perspectives is that they depict the similitude between so-called "new" and "old" media. It would be extremely naïve to think that videogames are a brand new cultural manifestation that does not draw upon any previous tradition. However, even if it sounds obvious, videogames are, before anything else, games. Sadly, good formal research on games is scarce. It seems that it is easier to use already popular theories rather that exploring the field from a fresh perspective. If we want to understand videogames, we first need to understand games. We need a *ludology*, a formal discipline that focuses on games, both traditional and electronic.

If videogames are not narratives, what are they? I am not denying that games and narrative do share many elements, but I think that the most particular characteristic of

games is that they are based on a different form of representation. Unlike narrative, which is constituted by a fixed series of actions and descriptions, videogames need the active participation of the user not just for interpretation matters, but also for accessing its content. Narrative is based on semiotic representation, while videogames rely on simulation[1], understood as the modeling of a dynamic system through another system. A narrative film about a dog gives us information about the dog itself (description) and the sequence of events that this particular dog endured (action). A virtual pet, like a Tamagotchi, is not about description or action, but rather about how it conducts itself in relationship with the player and the environment (behavior). In temporal terms, narrative is about what already happened while simulation is about what could happen. Narrative is a static form. Simulation is the form of change.

Because of its static essence, narrative has been used by our culture to make statements. We are used to explain, understand and deal with reality through narrative. Our religious and moral values have been historically shaped in this way through different sacred books (*Bible*, *Koran*, *Popol Vuh*). While the interpretation of sacred texts has always been open, the written words and the stories themselves have mainly remained fixed. On the other hand, simulation is dynamic and its essence is change: it produces different outcomes. This makes simulations not such a good choice for sacred moral codes since you may not want to have your holy scripts to alternative read, "Thou shall not kill" and "Thou shall kill". This also explains why videogames are not a good realm for historic events or characters or for making moral statements. A videogame about Anne Frank would be perceived as immoral, since the fact that she could survive or die depending on the player's performance would trivialize the value of human life. We all know that Anne Frank died and the reasons of her death; her story serves to convey a particular set of values.

The potential of simulation is not just to convey values, but to allow the exploration of dynamic systems. *Sim City*, Will Wright's urban simulator, is not about Paris or Rome, but about potential cities. Of course, it is possible to learn a lot about a big city such as Paris –or any other- through *Sim City* but that kind of knowledge is different from the one that we can read on a Hemingway or Balzac book. It would be possible to create a model of Paris in *Sim City* and use it for experimentation: "What would happen if I removed the Seine River? What if I used narrow streets rather than large avenues?" Novels usually take a concrete set of characters, in a particular setting, enduring a particular set of events. Simulations also have particularities and referents, but their main characteristic is that they allow tweaking and changing the original model. Certainly, a reader can extrapolate the characteristics of the characters and settings of a novel to model its

[1] I am often criticized for using the term "simulation" in a very broad sense, particularly by colleagues with a computer science background. Traditionally, simulations model real systems and connote an intention of scientific understanding. When I use the term it is in order to describe a different form of representation and, as it happens in modern semiotics, I do not see the need for a real referent. Just like the word "unicorn" lacks a real referent, I say that *Mario Bros.* simulates an imaginary dynamic system (the Mario world).

ideological rules. While this is an exception in narrative reserved for sophisticated readers, it is a requirement in simulations. Simulation is an ideal medium for exposing rules rather than particular events.

Inviting Aristotle out of the computer

Laurel's approach to software design and part of Murray's (particularly her concept of immersion as one of the three key providers of pleasure in interactive environments) are heavily influenced by Aristotle's *Poetics*. The fact is that, while Aristotle's ideas are definitively popular in our culture, other approaches exist. One of the biggest problems of Aristotelian Poetics, as explained by such theorists as Bertolt Brecht, is that spectators get immersed into the stories and lose their ability to take a critical distance from what is happening on the stage or screen. Of course, this effect is seen as narcotic mainly by authors whose intention goes further simple entertainment and want to trigger critical thinking on their audience, for educational, social, political reasons. The current tendency of the videogame industry is definitively Aristotelian: immersion needs to be increased by creating more realistic graphics and sounds.

In *Life on the Screen*, a brilliant study on how people deal with computers and simulations, Sherry Turkle envisioned the possibility of using simulations for players to analyze and question their ideological assumptions:

> But one can imagine a third response. This would take the cultural pervasiveness of simulation as a challenge to develop a more sophisticated social criticism. This new criticism would not lump all simulations together, but would discriminate among them. It would take as its goal the development of simulations that actually help players challenge the model's built-in assumptions. This new criticism would try to use simulation as a means of consciousness-raising.

These alternative simulations imagined by Turkle are not yet available on the computer. Interestingly, there are available somewhere else. For more than three decades, Brazilian playwright and drama theorist Augusto Boal has developed the "Theater of the Oppressed", an original form of theater that combines play and games to produce social and political simulations. He built his techniques based on the Marxist theater tradition developed by Bertolt Brecht and on Paulo Freire's *Pedagogy of the Oppressed*.

German playwright Bertolt Brecht developed a theory of drama that challenged Aristotle's ideas; he argued that Aristotelian theater keeps the audience immersed without giving them a chance to take a step back and critically think about what is happening on the stage. Brecht created several techniques in order to alienate what is familiar in the play, constantly reminding the spectators that they were experiencing a representation and stimulating them to think about what they were watching. Brecht's techniques were not exclusively targeted to the audience. He also encouraged performers to follow them. Brecht wanted the actors to be completely aware of their actions. Instead of being "inside the skin" of the character, he wanted them to be a critical distance that would let them understand their role.

Brazilian dramatist Augusto Boal took Brecht's ideas even further by creating a set of techniques, known as the "Theater of the Oppressed" (TO), that literally tears down the stage's "fourth wall." Boal's main goal is to foster critical thinking and break the actor/spectator dichotomy by creating the "spect-actor," a new category that integrates both by giving them active participation in the play. The repertoire of techniques of TO is extremely large and includes, among others, the "invisible theater" - where actors work "undercover" in public spaces- and the "Forum Theater."

Forums are created around a short play (five to 10 minutes long), usually scripted on-site, and based on the suggestions of the participants. The scene always enacts an oppressive situation, where the protagonist has to deal with powerful characters that do not let her achieve her goals. For example, the play could be about a housewife whose husband forbids her to go out with her friends. The scene is enacted without showing a solution to the problem. After one representation, anybody in the public can interrupt the play and take over the place of the protagonist and suggest, through her acting, the solution that she envisions would break the oppression. Since the problems are complex, the solutions are generally incomplete. This is why the process is repeated several times, always offering a new perspective on the subject.

In Boal's own words: "It is more important to achieve a good debate than a good solution." It is central to stress that Boal uses theater as a tool, not as a goal *per se*. In other words, the ultimate objective of Forum Theater plays is not to produce beautiful or enjoyable performances, but rather to promote critical discussions among the participants. Unlike traditional theater that offers just one complete, closed sequence of actions, Forum Theater sessions show multiple perspectives on a particular problem. They do not show "what happened" but rather "what could happen." It is a theater that stresses the possibility of change, at both social and personal levels.

For these reasons, TO is a perfect model for creating non-Aristotelian, non-immersive videogames. Earlier on this article, I have criticized other authors that explain games through narrative and theater, and here I am proposing a drama model for videogames! However, while Boal certainly uses theater techniques, his work is closer to games and simulation than to theater. As performance theorist Philip Auslander argues, Boal had to give up performance altogether in order to bridge the gap between performers and spectators (Auslander, 1999). Forum Theater is nothing but a game, with specific rules, that uses theater to simulate certain events and behaviors. Without a single line of computer code, Boal created a Third World, Marxist version of the Holodeck. And the best thing about it is that it works.

The search for a social and political Logo

Certainly, the idea of using simulation and videogames for educational purposes is far from new and was extensively explored by constructionism. The idea was developped by Seymour Papert through *Mindstorms* and Logo and continued by such authors as Yasmin Kafai's, who studied the process of learning of mathematics through videogame design.

The main problem with constructionism is that it works great with science education but was not designed for dealing with social and humanities education. This can be easily explained by many historical factors, including Papert's own background as a mathematician, the use of the computer as a paradigmatic tool and the birthplace, the tradition of simulation as a scientific tool and the birthplace of the movement (MIT). Certainly, Kafai's students had to research about Greek mythology for creating their videogames, but this was mainly a side effect, since their focus was on mathematics. Constructionism lacked the tools for providing an environment for critically discussing mythology, religion or history through the design of games.

Despite the fact that Paulo Freire's pedagogy was developed about the same time that constructionism and shared with it many common ideas, it had different goals (adult literacy and developing critical attitudes towards reality in order to attain social change) and settings (the Brazilian Nordeste, one of the poorest places of the world). Unlike constructionism, his pedagogy offers great tools for critical discussion and social awareness –but it is not as well suited for science education.

What I am proposing here is to use Boalian techniques to develop a complimentary approach to constructionism that would allow using videogames as a tool for education and sociopolitical-awareness. To create a simile with Logo, I will argue that we need an engaged, political Logo. We need an environment that engages children into questioning the ideological assumptions of the simulations. We need a political microworld where it would matter if the turtle turns left or right. In the next sections, I will shortly introduce two examples on how Boalian techniques could be brought to the computer. Please note that both systems are hypothetical and serve as an illustration of the potential of Boalian videogames.

Forum Videogames

This technique is a computer-based equivalent of Boal's Forum Theater that uses videogame rather than drama. Instead of performing on a stage, participants would analyze real life situations by creating videogames and then modifying them in order to reflect their personal points of view.

Forum Videogames could work as a feature available inside a bigger "Videogames of the Oppressed" online community. It would be targeted to a homogenous small group –for example, a class of high school teenagers- coordinated by a moderator. Any participant –who will be referred as the "protagonist"- would be able to start a "forum. Each forum would have a short description and any member would be able to join it if she is interested in the topic. The protagonist would be able to design one or a series of videogames where she would try to simulate a problematic situation that she is trying to deal with. The process of videogame design would be done by modifying preexistent templates based on classic videogames (Space Invaders, Street Fighter, Pacman, etc).

Once the game is ready, the protagonist would post it online, allowing the rest of the group to play with it. Players would be able to post their written comments and even

submit a modified version of the game that reflect their personal position towards the protagonist's problem. The modified version could be a variant of the protagonist's original game, or a brand new game based on a different template. The process would repeat many times, just as it happens in Forum Theater, triggering new designs and discussions.

For example, let's imagine that the protagonist's problem is that he is being bullied at school and he doesn't know how to deal with this. In order to simulate his problem, he could use a Pacman template and modify the original game. He would replace the Pacman with a cartoon version of himself that he would draw. He would do the same by replacing the ghosth with images of his harassers. He could take away the score feature and the pills, leaving nothing but a labyrinth where he is being constantly chased. Once that game is posted online, the other members of the group could respond by creating variants. One of them could be to modify the structure of the labyrinth to create a small space where the protagonist could live isolated, safe from the bullies. But other players could say that this means giving up his freedom to wander around and, therefore, that it is not a good solution. Then, another player could suggest using violence, by introducing weapons on the environment. Another may suggest introducing more players (several Pacmans) who would stick together and defend themselves as a group of virtual vigilantes. Of course, somebody may argue that it is technically impossible to be all the time surrounded by your friends: the bullies will find you alone sooner or later.

Again, the goal of these games is not to find appropriate solutions, but rather serve to trigger of discussions –which could be done in person or through chat. It would not matter if the games could not simulation the situation with realistic accuracy. Instead, games would work as metonyms that could guide discussions and serve to explore alternative ways of dealing with real life issues.

Simulating Characters in The Sims

The Sims represents a breakthrough in videogame design. For the first time, a best-selling game is not about trolls and wizards. This simulation is about regular people –known as Sims - in everyday situations in an American, suburban environment. In my opinion, *The Sims* biggest achievement was that it fully opened the Pandora's box of simulating human life. While structurally *The Sims* is similar to other resource management simulations, the fact that it portrays people and not aliens results in players asking questions about the game's ideology. Is it ok to let a Sim starve to death? Is it possible to have same-sex Sims relationships? What about threesomes? Would I spoil my Sim child if I buy her too many toys? All these questions would have probably never been asked if the game had been about monsters or aliens. The fact that the best-selling game of the year 2000 was about people is a clear sign that videogames are on their way to maturity.

For ages, our civilization has been learning to deal with the issues of representation, including concerns about its accuracy and its limits. Videogames like *The Sims* are introducing to the masses a different form of representation – simulation- which has always been present in our culture through games, but that now can model more complex

systems, such as human life. Even if *The Sims* is a very limited model of human relationships, it is a harbinger of videogames as a mature communicational and artistic form.

The Sims' constraints are many. For example, Sims cannot communicate in a verbal language and their personal relationships are closer to slapstick than Ingmar Bergman's characters. In addition to this, the consumerist ideology that drives the simulation is nothing short of disturbing: the amount of friends that you have literally depends on the number of goods that you own and the size of your house. Nevertheless, simulation is an extremely complex task and, despite its shortcomings, *The Sims* succeeds at delivering an enjoyable game involving human characters.

The game allows players to create their own skins and designs and then share them online. However, the designers did not create an open environment where players could modify the rules of the simulation by coding new behaviors and objects. This is understandable from a marketing reason: software companies want both to retain authorial control over their productions and to prevent players from creating controversial materials.

What follows is a description of how a hypothetical, open-source modified version of *The Sims* could serve as an environment for players to take a distance from the representation and engage in critical discussions. My intention is to show that Boal ideas could also be used in mainstream videogame design. While my previous example was better suited for small groups, educational or therapeutic environments, this one could appeal to a larger community of players.

In traditional videogames, the player "is" the character. In *The Sims* the player can control the character in a less direct way. However, *The Sims*' characters are generally flat, since most of their differences are based either on their moods, or on visual traits that do not affect their behavior. This would be solved if players had more control over character creation by deciding their behavioral rules instead of just selecting their clothes.

In order to allow the discussion of social issues, the modified version of *The Sims* that I propose should allow players to modify the internal rules of the characters. The basic gameplay would be similar to the current game but, in addition to downloadable objects and skins, it would also be possible to get user-designed characters with different personalities and particular sets of actions. These characters would be created with a special tool that would require programming. Players would be able to rate the different characters and even create their own versions, based on behavioral details that they think need improvement in order to attain a higher level of realism. Both behaviors and comments would be available online in a "Character Exchange" site.

A Sample Scenario

The following is a sample scenario of a particular session, based on the rules that I am proposing:

Agnes has been playing with *The Sims* for a while. She knows the basic dynamics of the simulation and enjoys it. Nevertheless, she feels that it would be great if family relationships were more realistic. So, she goes to the "Character Exchange" web site and browses through different characters. She finds one that looks interesting. It is called "Dave's Alcoholic Mother version 0.9," and it has the following description:

> This mother spends a lot of time working, and she is very tired when she gets back home. Still, every night she has to fix dinner and do some housecleaning. She can get very annoyed by children and pets and may become violent. In order to escape from her terrible life, the mother drinks a lot of bourbon.

Agnes considers giving it a try and downloads it into one of the houses with which she has been playing. Agnes' virtual household is composed of a couple, three children, and a cat. After the download, her original mother character is replaced by "Dave's Alcoholic Mother version 0.9". Agnes finds the character quite interesting. After playing with it for a while, she realizes that when the mother reaches a certain degree of fatigue, she starts drinking. The more she drinks, the less she will care about her family. She remains calm unless her husband insists on cuddling or giving her a back rub.

While Agnes thinks that the character is pretty well depicted, there are details that she does not agree with. For example, the character always gets her drinks from the little bar in the living room. Agnes knows from personal experience that, in general, alcoholics hide their bottles around the house and try not to drink in public. So, she goes back to the "Character Exchange" and writes a public critique of Dave's creation. After doing this, she tries alternative "alcoholic mothers". If the available characters do not satisfy her, she can modify one of the available versions and introduce a new behavior that makes the mother to hide her alcohol bottles. She can then post this new character online and make it available to other players.

Some weeks later, Agnes gets a little tired of playing with that alcoholic mother and wants to give her some more personality. So, she decides that it would be great if she could add some extra behavioral code to it. Agnes downloads a character described as "Peter's Radical Greenpeace activist version 9.1." After some editing and modifications, Agnes introduces this behavior to her alcoholic-mother character. The new character would still be an alcoholic, but she would take more care of plants, recycle everything and would never kick her pets while drunk.

The problems of simulation building

As I previously said, the biggest obstacle for building Boalian videogames lies on the fact that programming simulated behaviors is an extremely difficult and time-consuming task. Even if with a design tool that involved templates or some kind of visual object-oriented programming, it is likely that the average player would consider the task overwhelming. Still, as Amy Bruckman's work on *Moose Crossing* (an object-oriented, multi-user dungeon where participants can modify the environment by creating new objects)

suggests, players can become really involved with programming simulated features and will exchange tips and help with others who are less skilled programmers.

While it is possible that certain players could deal with the programming of new behaviors, it is likely that most participants would only to be able to download behaviors. I think that even if most players would not be able to code their own features, they could at least tinker with preexisting behaviors. The fact that a single behavior such as alcoholism could be available in so many different versions would encourage players to think about issues such as social construction of reality but also to defend their points of view and listen to alternative opinions.

Of course, the lack of programming proficiency is not the only problem that Boalian videogame designers would face. However, the popularity of simulators such as *The Sims* or *Sim City* may serve as a tool for transforming the perception of videogames from interactive narratives into simulated models. As the public becomes more familiar with manipulating and modifying simulations, the concept of designing their own may become more appealing.

Conclusion: Videogames of tolerance

The two examples that I just gave should be considered more as illustrations of the paths that should be taken in order to design Boalian videogames than as blueprints for actual systems. The main goal of these examples is to show that videogames could be used as tools for better understanding reality and raising critical-awareness among players. Current Aristotelian videogame design paradigms such as immersion should not be taken for granted, since questioning the values and mechanics of videogames could also be a source of pleasure for players.

The main problem of these examples is that they require players to be very good programmers, a prerequisite that might be impossible to attain. Nevertheless, there may be some possible solutions to this problem. Further details on these techniques can be found on “Videogames of the Oppressed”, a Thesis developed at the Georgia Institute of Technology and on which this article is based (available at www.ludology.org).

When I describe these ideas to fellow researchers or game designers, it is usual that they ask me if I really believe that social and personal change is possible through videogames. My answer is always a straight “no”. Neither art not games can change reality, but I do believe that they can encourage people to question it and to envision possible changes.

Unlike narrative, simulations are a kaleidoscopic form of representation that can provide us with multiple and alternative points of view. By accepting this paradigm, players can realize that there are many possible ways to deal with their personal and social reality. Hopefully, this might lead to the development of a tolerant attitude that accepts multiplicity as the rule and not the exception.

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