Videogames of the Oppressed: Critical Thinking, Education, Tolerance, and Other Trivial Issues

Gonzalo Frasca

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 reality? Although videogames are now about three decades old, these questions remain unanswered. It seems that even if the medium has reached incredible popularity, it is still far away from becoming a mature communication form that could deal with such things as human relationships, or political and social issues. Or maybe it can never become such thing. After all, as many may say, these are simply games and games have been considered trivial entertainment for ages. Nevertheless, I claim that videogames could indeed deal with human relationships and social issues, while encouraging critical thinking. In this essay, 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 (1991), computer software and videogames can be understood through the same rules that Aristotle described in his Poetics. The “interactive drama/storytelling/narrative” paradigm has been the leading design guide in most current videogame design, supported both by such theorists as Laurel and Janet Murray (Murray 1997) and by the videogame industry. It seems that the current tendency is to expand the computer (and videogames) as an extension of a previously existent medium: Laurel did it with drama, Murray with storytelling and, more recently, Lev Manovich (Manovich 2001) based his approach on film studies. The main advantage of these perspectives is that they depict the similarity 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, experimentation which are less available to audiences of traditional narrative forms. This seems to me to be mostly right, and I too have been intrigued and excited by the opportunities that users of digital media have to appropriate, reshape, and subvert centrally-produced content, particularly with the advent of the web and greater mobilization of user communities.

At the same time, I feel it is important to consider not only the differences between videogames and narrative forms but also the connections and overlaps. I am not necessarily pointing to the use of narrative form and theory in game design, but rather how our engagements with popular culture embed us in a hybrid media ecology as print, movies, games, and television increasingly reference one another. Looking at the media mix around children’s content in Japan,
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games. Sadly, good formal research on games is scarce. It seems that it is easier to use already popular theories rather than exploring the field from a fresh perspective. If we want to understand videogames, we first need to understand games. We need a ludology (Frasca, 1999), 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 as Espen Aarseth argues (Aarseth 1997), it is necessary to study games through a cybernetic approach. Unlike narrative, which is constituted by a fixed series of actions and descriptions, videogames need the active participation of the user not just for interpretational matters, but also for accessing its content. Narrative is based on semiotic representation, while videogames also rely on simulation, 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, such as 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.

Because of its static essence, narrative has been used by our culture to make statements. We 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). Although 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 alternately 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 for her death; her story serves to convey a particular set of values.

The potential of simulation is not as a conveyer of values, but as a way to explore the mechanics of dynamic systems. SimCity”, Will Wright’s urban simulator, is not about Paris or Rome, but about potential cities. Of course, it is possible to learn a lot

the hybridization between different media types is one of the most interesting sites of action. The narrative strengths of television, movies, and comic books furnish compelling characters, backstory, and setting for the more interactively intense and personalized formats of card games, videogames, and digital pets.

Thus, more than the distinction between narrative and simulation, I find myself galvanized by Frasca’s distinguishing between different stances of engagement: critical versus immersed, actor versus spectator, or producer versus consumer. I am just back from Comiket, the largest convention in Japan, which is devoted to buying and selling comics and computer games created by fans. Content ranges from genre mixing, to pornographic renderings of mainstream characters, to exploring alternative narratives and character qualities. This material would not be taken up by mainstream publishers, and often embeds a critical stance toward mainstream media. “Biobazard Pikachu” is mostly about humor, pleasure, and play, but is also a critical commentary on Nintendo’s production of sanitized cuteness. This kind of appropriation and remaking seems to be at the heart of what Frasca envisions for the videogame community, and is something that cross-cuts media genres, as studies of fan communities have amply demonstrated (Penley 1991; Jenkins 1992; Tulloch and Jenkins 1995).

The productions of fan culture are just one piece of the dead serious economic and social negotiations around popular culture, and the ongoing political struggles between producers and consumers. For example, adult action entertainment is in a politically
about a big city such as Paris — or any other — through SimCity, but that kind of knowledge is different from what we can read in a Hemingway or Balzac book. It would be possible to create a model of Paris in SimCity and use it for experimentation: "What would happen if I removed the Seine River? What if I built 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 references, 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 ideological rules. Although 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.

**Resurfacing from Immersion**

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 Aristotelian 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 in the stories and lose their critical distance from what is happening on the stage or screen. Of course, this effect is seen as narcotic only by authors whose intentions go further than simple entertainment and want to trigger critical thinking in their audience — for educational, social, and/or 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* (1995), a brilliant study in 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 approach...

antagonistic relationship with educational children's media, both at the institutional level (capitalist/private versus nonprofit/public), and at the level of explicit representational content. This antagonism is a force in everyday negotiations about play versus homework, what software makes it into the schools, or whether a game should be marketed as an entertainment, kids, or educational title. In other words, videogames function as political actors in a wide range of settings that extend beyond moments of game play.

At the end of his paper, Frasca ruminates on the difficulties of getting people to engage deeply with the videogaming medium in the form of programming. Clearly this is a key barrier to the types of social engagements that Frasca envisions. Again Comiket strikes a hopeful note. The content at Comiket spans gender categories and a broad range of genres such as Action, Romance, and Fantasy, and the technical sophistication of the productions is often on par with professional comic production. My hope, my belief even, is that if people identify with the content, have a compelling investment, and a degree of organization, they will overcome substantial technical obstacles.

As Frasca reminds us, it is not just the design of games that creates new social possibilities, but the ways in which this content gets mobilized by players. Frasca's proposals are perhaps most radical as a call for changing the social and economic conditions in which games get produced and played, even more than as a call for different sorts of game content. His example of critical engagement with *The Sims* importantly relies on an open-source model. In addition to considering how
criticism would try to use simulation as a means of consciousness-raising. (71)

These alternative simulations imagined by Turkle are not yet available on the computer. Interestingly, they 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 theater and simulation in order to produce social and political simulations. He built his techniques based on the Marxist theater tradition developed by Bertolt Brecht, as well as on Paulo Freire’s Pedagogy of the Oppressed (1970).

Bertolt Brecht’s drama challenged Aristotle’s ideas; as mentioned previously, 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, however, were not exclusively targeted at the audience. He also encouraged performers to be completely aware of their actions. Instead of being “inside the skin” of the character, he encouraged having a critical distance that would let them understand their role.

Brazilian dramatist Augusto Boal (1971) took Brecht’s ideas even further by creating a set of techniques, known as the “Theater of the Oppressed” (TO), that tear 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 enact 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 audience can take over the role of the protagonist and suggest, through her acting, a solution that she thinks would break the oppression. Since the problems are complex, the solutions are generally

From Eric Zimmerman’s Online Response

If, as I believe, existing digital games are riddled with ideological baggage, why not use one of the many open-game creation systems commercially available? Zillions of Games <http://www.zillionsof-games.com> is a software package that lets users design the art and create the rulesets of turn-based multiplayer games. 
Adventure Game Engine <http://www.owltugs.com> lets players script complex multimedia adventure games. Game Maker <http://www.cs.uu.nl/people/markov/gmaker/> is a free software package that lets players create action games. Similar nondigital game exercises exist as well, such as STARPOWER, a classroom exercise that explores power, economics, and society though the

game design can support player tinkering. we could also consider the political, social, and economic arrangements necessary for such activity. What kinds of economic and institutional arrangements can support critical player engagement? How could we fund open-source game design and game communities? How can we make videogame hacking an accessible and legitimate enterprise outside of the core game community?

Yes, there is much to be done, and it is encouraging to see Gonzalo Frasca is working in this space.
incomplete. This is why the process is repeated several times, always offering a new perspective on the subject. In Boal's (1992) 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, nonimmersive videogames. Earlier in this essay, I 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, non-Aristotelian version of the Holodeck. And the best thing about it is that it actually 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 already extensively explored by constructionism. The idea was developed by Seymour Papert through Mindstorms (1985) and Logo, and it was continued by such authors as Yasmin Kafai (Kafai 1995), whose students learned mathematics through videogame design. The main problem with constructionism is that it was not designed for dealing with social and humanities education. This can be easily explained by many factors, including Papert's own background as a mathematician and the election of the computer as their main tool. Certainly, Kafai's students had to research Greek mythology to create their videogames, but this was mainly a side effect, because their focus was on mathematics. In fact constructionism's main success stories are in the field of science education, and it does not seem to be the ideal environment for critically discussing human and social matters.

Paulo Freire's pedagogy was developed about the same time as constructionism. In fact, they share many programmed breakdown of social game rules
(Ellington, Addinal, Percival, 1982). [. . . ]

In his second proposal, Frasca seems to exhibit a fundamental misunderstanding of the way that games function. Near the beginning of presenting his Sims-based "videogame of the oppressed," he laments the many "constraints" of The Sims. Actually, constraints are the raw material out of which games are made. This misstep leads to other problems.

Frasca Responds

Mods and hacks certainly could help to develop "videogames of the oppressed" but the top-down approach is also needed. We will not see critical videogames until major games are developed by biased authors that understand that fun is not the only thing that could be conveyed through this medium.
characteristics. However, Freire had different goals (mainly adult literacy and the development of 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 complementary approach to constructionism that would allow the use of videogames as tools for education and sociopolitical awareness. To create a simile with Logo, I argue that we need an engaged, political Logo. We need an environment that engages children in questioning the ideological assumptions of videogames. We need a political microworld where it would matter if the turtle turns left or right. In the next sections, I introduce two examples on how Boalian techniques could be brought to the computer. Please note that both systems are hypothetical and serve only as an illustration of the potential of non-Aristotelian videogames.

Forum Videogames
The following technique is a computer-based equivalent of Boals Forum Theater that uses videogame rather than drama. Instead of performing on a stage, participants would discuss 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. 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, Pac-Man, 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 reflects 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 Pac-Man template and modify the original game. He would replace the Pac-Man with a cartoon version of himself and replace the ghosts with images of his harassers. In addition to this, he could also 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 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 Pac-Mans) 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 discussions — which could take place in person or through online chat. It would not matter if the games could not simulate the situation with realistic accuracy. Instead, these 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's biggest achievement was that it fully opened the Pandora's box of simulating human life. Although 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 okay to let a Sim starve to death? Is it possible to have same-sex Sims relationships? What about threesomes? Will 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 towards maturity.

For decades, 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 dare to start modeling 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's constraints are many. For example, Sims cannot communicate in a verbal language and their personal relationships are not described with depth. In addition, 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 perspective: 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 distance themselves from the representation and engage in critical discussions. My intention is to show that Boal's ideas could also be used in mainstream videogame design. Although 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's characters are generally flat, because most of their differences are based 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 encourage critical debate, the modified version of The Sims that I propose would 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 simulation for many days. She knows its basic dynamics and enjoys it. Nevertheless, she feels that it would be better if family relationships were more realistic. So, she goes to the "Character Exchange" web site and browsers 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 reality, she 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's 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.

Although 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-mother behaviors. 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 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 her character 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 cat while drunk.

The Problems of Simulation Building
As I previously said, the biggest obstacle for building Boalian videogames lies in the fact that programming simulated behaviors is an extremely difficult and time-consuming task. Even 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 (1998) 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.

Although it is possible that certain players could deal with the programming of new behaviors, it is likely that most participants would only be able to download behaviors made by others. 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 from players from different social and cultural backgrounds would encourage players to think about issues such as social construction of reality — but also about defending their points of view and listening 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 SimCity 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 could be taken in order to design Boolean 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 engagement for players.

The main problem with 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 in "Videogames of the Oppressed," a thesis (Frasca 2001) developed at the Georgia Institute of Technology and on which this article is based (available at [www.ludology.org](http://www.ludology.org)).

When I describe these ideas to fellow researchers or game designers, they usually ask me if I really believe that social and personal change is possible through videogames. My answer is always a straight "no." Neither art nor 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.

**Note**

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 connotate an intention of scientific understanding. When I use the term it is in order to describe a different form of representation and, as in modern semiotics, I do not see the need for a real referent. Just as the word "unicorn" lacks a real referent, I say that *Mario Brothers* simulates an imaginary dynamic system (the Mario world).

**References: Literature**


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References: Games

The Sims. Will Wright; Electronic Arts. 2000.