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Exploring the Creative Potential of Values Conscious Design: Students' Experiences with the Values at Play Curriculum

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It's understandable if video game designers are leery when games and values are mentioned in the same breath. Games are routinely criticized in the popular media from a "family values" perspective, but in general these criticisms are either misinformed or intentionally misleading. One particularly egregious example is a recent Fox News segment that grossly mischaracterized the sexual content of Bioware's (2007) role-playing game Mass Effect. Although the game's momentary flashes of sexual activity are less explicit than some prime time network television shows, it was described by a member of the Fox panel as "Luke Skywalker meets Debbie Does Dallas." Worse still, an invited "psychology expert" made the dubious claim that playing Mass Effect could pervert the psychosexual development of young boys. Even a cursory review of the literature on media effects would reveal the ludicrousness of her arguments, but it is likely that most viewers were unfamiliar with this literature. Part of the fallout from this kind of coverage is that some gamers and designers are averse to talking about the relationship between games and values at all. They've been soured by the disingenuousness of so much of the discussion on this topic.

Our project, Values at Play[1] (VAP), is concerned with issues at the confluence of values and games, but we take a very different approach than family-values oriented critics. Broadly speaking, we're interested in how designers can use games to affirm, explore, and question particular cultural, political, and moral values. For example, imagine a game that explores what the value of patriotism means in the context of recent controversy over immigration. Or a racing game that values cooperative over competitive play. Or a war game that calls into question portrayals of war in mainstream entertainment media. These examples have at least two things in common: The first is that they would likely be motivated by their designers' interest in or commitment to particular values. The second is that their design would require a significant departure from the standard (and sometimes clichéd) devices of mainstream games.

One of VAP's primary activities has been the development and implementation of a curriculum to introduce graduate and undergraduate game design students to "values conscious design." The curriculum is freely available to download at www.valuesatplay.org (for a detailed overview of the curriculum, see Belman et al. 2009). To clarify, we describe games as values conscious when their designers have considered the moral, social, and political resonances of design features in a systematic way. In our experience, this type of approach can effectively inspire innovation in design. This is because values conscious designers explore themes and work with constraints that are often outside of mainstream, entertainment-

Eludamos Vol. 4, No. 1 (2010)
p. 57-67

focused designers' concern. Therefore, they tend to produce designs that are markedly different from the mainstream.

The curriculum has been used in several leading American game design programs, including at Georgia Tech, The University of Southern California, University of California San Diego, the Rochester Institute of Technology, and Hunter College. At each of these programs, we've conducted extensive evaluations that have given us a more complete understanding of the challenges involved in this type of design.

In this paper, we report and discuss the results of a focus group study and design work analyses that were conducted with students in an undergraduate game design course using the curriculum. The students were a diverse group with respect to gender ethnicity, major, and career ambition. Although many were avid gamers, most did not have previous game design experience (the curriculum has been specifically designed to be accessible to novices while still being useful to the more experienced). Their instructor used the VAP curriculum for the last four weeks of their course. At the beginning of the VAP unit, each student used brainstorming tools included in the curriculum to generate game ideas. By the end of the unit, they were expected to have fleshed out their ideas into complete design documents.

Methods

Two weeks after the course ended, six students from the undergraduate course using the VAP curriculum participated in a two-hour focus group. Three of the participants were women and three were men.

Data from both the focus group and these students' design documents were analyzed using grounded theory research methods, in which investigators allow themes and hypotheses to gradually emerge during the process of data analysis, rather than imposing preconceived hypotheses at the beginning of the study (Glaser and Strauss 1967). One major advantage of grounded theory is that researchers can choose to pursue, modify, or replace their initial hypotheses as the data seem to warrant (Charmaz 2006). This is especially helpful when researchers are studying new topics, as their initial hypotheses are likely to be based on very incomplete information. In our case, we believed that grounded theory methods were particularly appropriate at this early stage of the curriculum's implementation and assessment.

We expected to find (and did find) that the curriculum prepared students to systematically consider values in the design of video games; but the grounded theory methods we used allowed us to adapt our study to the variety of unanticipated outcomes we observed.

Findings

Participants in this part of the research volunteered, but were also acknowledged by their teacher as those who were most engaged with ideas in the VAP curriculum, and who produced most thoughtful design documents. Therefore, the results of the focus group study and the design document analysis should not be assumed to be

representative of the entire class. Rather, they should be viewed as a portrait of students for whom ideas in the VAP curriculum particularly resonated.

Students' Critical Analyses of Games and the Games Industry

One of the core intellectual principles of our project is that values are always "at play" in games whether designers intend them to be or not. Indeed, more broadly speaking, this is a point that has been made in many disciplines about the design of technical artifacts in general. It is impossible to create an artifact that does not reflect values from some source (e.g. the maker, or the maker's society), convey them through its structural features, and in some cases even impose those values on users (e.g. Winner 1980; Mackenzie and Wajcman 1985; Latour 1992).

Students were exposed to these ideas in class discussion, and through several readings. In one, Rachel Weber (1997) makes a compelling argument that gender-based discrimination has been designed into the features of a military flight training system. She does not claim this is the result of a malicious intent towards women, but rather that it is a manifestation of values unconsciously translated into design features.

Evidently, the students in our focus group had little trouble applying this idea to their experiences with video games. In the following passage, taken from the focus group transcripts, two students articulate their ideas on how values are at play in games in ways sometimes irrespective of designers' intentions:

> Gordon: Maybe the developers are making a game with a certain representation of a female … and he's not trying to say, "Look, I'm trying to teach you this is what I think about females. They should have no clothing." But the game says that anyways. And the game doesn't have to say it to say it. I don't know if that sounds clear.
>
> Alyx: It's implicit.
>
> Gordon: Yeah, it's implicit.

Another student focused on the role that user expectations play in determining how a game's "value-laden" design features are interpreted:

> Marcus: I think the design is just a play on … I don't think it's subliminal, I think the design is a play on what we already kind of expect from the guy and the girl. … I have Gears of War [a game with a male player character] and I've played Tomb Raider [a game with a hyper-sexualized female player character] before. Gears of War feels perfectly natural when you play it. You don't think, "Oh why is he ducking behind this wall." And also when you play, I didn't think, "Why is she flipping in the air showing off her legs?" Even though that wouldn't happen in any game with a man I didn't think about it until [our teacher] brought it up. … So I think it kind of plays on what we already expect. This hot chick kicking ass, it feels natural … until you start to think about it.

We hope that students who use the VAP curriculum will ultimately become adept at considering values in their own design processes. Specifically, we hope the values at

play in their games will be the outcome of their conscious intentions and careful design. However, an important first step towards this is for them to understand how values are at play in the design features of existing games, often in ways that do not reflect a conscious decision on the part of designers. In our experience, this understanding is not something that students necessarily have at the beginning of the VAP unit. Therefore, we're very encouraged that at least some students seem to have taken on a posture of critical, values-focused alertness towards both the mechanics and representational aspects in games.

The Challenges of Values Conscious Game Design

Most students were enthusiastic about experimenting with a values-focused design process. In particular, they felt it represented an interesting departure from more traditional genre-focused design tasks. For some students, the idea of designing a game based on "generosity" or "fairness" seemed to hold more creative potential than designing a "first-person shooter". However, they were also aware of the unique challenges posed by values-conscious design.

There were two challenges in particular that students in the focus group returned to repeatedly in their discussion. The first is a perceived conflict between making games to be "values conscious" and making them fun. The second was a tendency for the conventional clichés of game design to subvert the designers' original values oriented design goals. In the focus group, these ideas were articulated by Lara, who created a game based on real events about race-based conflict between black and white high school students in a Louisiana town:

> Lara: When we were making [our] game … it was really hard to overcome the traditional gaming concept of you've got to kick someone's ass, someone's got to win … but those concepts wouldn't work with our game … it's really hard because you don't want to make a game overly cheesy and then no one wants to play, or they make fun of it; so I guess your meaning has to be really subtle or not so in your face where it's still fun to play.

Mario designed a game based on the same events, and faced similar challenges:

> Mario: When we started thinking about the game, our game started off like a rumble game: all the black kids and all the white kids just beating the crap out of each other, in the middle of the field.
>
> Lara: But that has no social value.
>
> Mario: Exactly! That's the first thing that came into our mind. But you know, there's got to be a better game than this. Because the first thing you see is conflict. You've got to go deeper than the conflict.

Mario has an important insight here. Conflict is often seen as a necessary and vitalizing ingredient of games, and in mainstream video games conflict usually takes the form of violence. However, mechanics that are based on violent conflict may limit the scope of a game's ability to address particular themes.

In Mario's case, the solution was to make a game that is narrative-driven as opposed to conflict driven. In his game, *Battle by the White Tree*, the player character is an impartial investigator called to look into a simmering conflict between black and white high school students. His or her goal is not to takes sides, but to understand the roots of the conflict.

Other students were less successful in resisting conventional design clichés:

> Gordon: In our game [One Nation Under Smog, which addresses the social issue of urban pollution] the underlying mechanic is conflict when it comes down to it. We ended up with a final level, a final boss, where you're fighting the CEO of this corporation on the roof of his building. It's cool and all, and I think it would be very fun, but what does that say to the issue in real life?

To be clear, our point here is not that values-conscious games cannot be based on conflict. Certainly, games can make a powerful statement by reframing conflict in a way that doesn't affirm violence as a value in and of itself. For example, it has been argued that the game *Portal*, while adopting some of the trappings of a first person shooter, is actually a feminist critique of that genre. The player character's gun, traditionally a "phallic symbol of masculine agency," is re-imagined as a teleportation device that the heroine uses to avoid direct conflict (McNeilly 2007). Instead of shooting at her adversaries, she neutralizes them by cleverly placing teleportation portals, which in some cases trick them into shooting at each other or themselves (and thus they are defeated by their own aggression).

However, most of the students in our focus groups were to some extent leery of including any sort of conflict in their games, presumably because they felt it might subvert the "positive" messages they hoped to convey.

Students' Strategies for Integrating Values into their Games

One of the curriculum's goals is to provide students with both readings and experiences that guide them in *translating* values into concrete design features of games. Students tackled the challenge of "translation" in many different ways. Their strategies can be grouped into three categories: (1) Repurposing conventional game mechanics, (2) Using design features that are typical of serious games, and (3) Innovating a significant departure from traditional game design conventions. Here we provide examples of each strategy from students' work.

Category 1 Strategies: Repurposing conventional game mechanics

Gordon describes how his game, *One Nation Under Smog*, repurposes a conventional first person shooter mechanic to affirm environmentalist values:

> Gordon: You play this guy who is like a freedom fighter in New York City fifty years in the future where this pollution conglomerate had made the city really dirty. And you have this weapon, but it [isn't] a typical gun. It [is] a solar-powered carbine (I think we called it). You use it to kind of zap pollution away, and it recharges by trying to find pockets of sunlight in the sky where sunlight would hit

> it and power it. So depending on how well you did in the level there would be more clear spots in the sky – less clouds and smog – and you'd be able to charge your gun up faster.
>
> Our character had a weapon. That was the first thing everyone kind of agreed upon, a weapon. But we wanted to make it something a little different than just like bullets and killing people. It was difficult to make something different without making it seem like it didn't fit. … I think that it did end up working out well … it took a while to reach that.

Gordon designed *One Nation Under Smog* so that in order to "power up" your gun you need to clean up the city. This rewards players for affirming the value of environmentalism, but the reward is an increased capacity to engage in the type of violence that is typical of many mainstream games. In a statement already quoted in this article, Gordon expresses some degree of unease with his approach in this project. However, while acknowledging its possible limitations, we still believe that the value of environmentalism is "at play" in *One Nation Under Smog* in a clever and innovative way.

Category 2 Strategies: Design Features that are Typical of Serious Games

Through readings and class discussions, students were introduced to some of the design strategies that have been used in "serious games" (i.e. games intended for purposes other than entertainment, such as education, activism, or advertising). One strategy that particularly resonated with students was the idea of making a game that is unwinnable, or in which the win state is unconventional. This feature is often used when a game models some intractable real world conflict, and therefore providing an in-game solution would seem to trivialize the issue.

A classic example of this is Gonzalo Frasca's (2002) *September 12*. In that game, the player is presented with an overhead view of what appears to be a marketplace in a Middle Eastern city. People move around the marketplace, and occasionally the player sees armed figures in Arab headdress. These are presumably supposed to represent terrorists. The player can control a targeting reticule over the scene, and pressing the space bar launches a missile. However, when a player launches a missile at the characters dressed as terrorists, it is usually too slow to hit them. Instead, numerous bystanders walking through the marketplace are killed in the blast, and nearby people begin grieving for them. Some of the grievers themselves turn into terrorists, and thus launching missiles will inevitably create more terrorists than it kills. Therefore, there is no way to win this game in a conventional sense (i.e. by killing all of the terrorists) with the means afforded (i.e. missiles). Rather, it could be argued that some form of a win state is achieved when the player realizes the designer's message about the War on Terror and stops playing altogether.

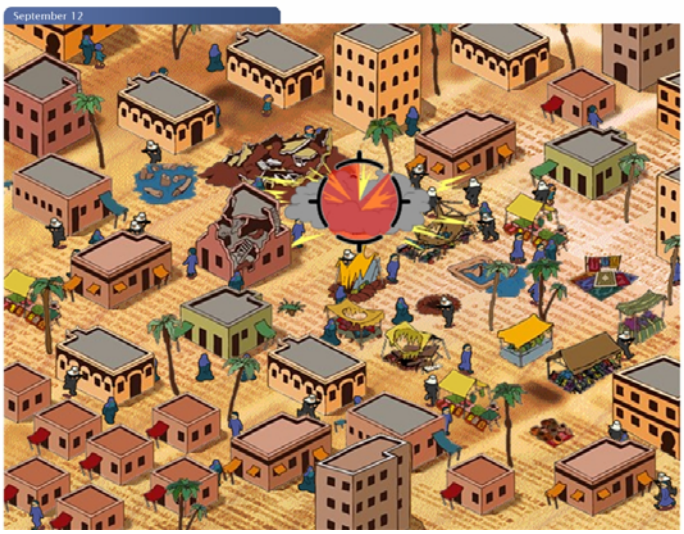

Figure 1: Gonzalo Frasca's September 12

Several students in the class created design documents for games that were either unwinnable, or had unconventional win states. One applied this strategy to a game that addressed the problem of pollution:

> April: [In my game] there's this island that some sort of mist or fog descends on it … people start getting sick so one person goes out to try and find out what happened and why this mist came down. And they have this little [device]. It's a little thing that runs on the mist so they go into the mist and they use it and it releases clean oxygen into the air instead. But you can't ever really win the game; you can just make it less polluted.

April's game conveys the message that pollution is a difficult problem, and that while things can be done to ameliorate its effect, it will not cease to be a problem.

Marcus's game, *Cabbies*, about a taxi driver who leases a medallion (i.e. a permit to drive a taxi) is designed "so it's really impossible [for the player character] to progress in life." This represents the difficult working situations of taxi drivers more accurately than if the game had an easily achievable win state.

Category 3 Strategies: Innovating a Significant Departure from Traditional Game Design Conventions

A very small number of students designed their games using mechanics that were typical of neither mainstream nor serious game design. In these cases, they fashioned a new mechanic to better embody the value they had decided to include in their game. An excellent example of this is Marcus's game, *Cabbies*:

> Marcus: It [is] about how people see cab drivers differently. Instead of having the idea [that] cab drivers are all jerks and they cut everybody off and they race like maniacs, put [the players] in a position where they're the cab drivers and they get to see what cab drivers go through on a daily basis.

> [In] my cab game, you had to get his medallion so he could own his own car … and for my [mechanic] the [passenger in the taxi] would read out the instructions [directions to a location] and on screen it would show what they say. So if you had a language barrier you wouldn't get the whole [set of] instructions, you would just get some of them, and hope you get it right.

At the beginning of the unit, Marcus had decided that the value of empathy would be a core design consideration in his game. In *Cabbies*, the player is forced to see things from an uncomfortable perspective, that of a New York City taxi driver who cannot always do his or her job well because s/he is not fluent in English. Part of the taxi driver's world view is built into one of the central mechanics, and this cleverly puts the value of empathy "at play" in the game.

This may be most difficult approach to integrating values in the design of a game, as it requires the greatest degree of originality. Yet, as demonstrated by Marcus's game idea, the outcomes can be enormously compelling.

Discussion

Although this study was designed to explore students' experiences with the VAP curriculum, many of our findings are also valuable to instructors who are more broadly concerned with moral, social, and political considerations in systems design. Here, we summarize some findings that may be of particular interest.

First, students are likely to perceive some degree of incompatibility between designing games to be entertaining and integrating values as a core design consideration. This may be in part because they think that values-conscious games should not be based on conflict, and they see simulated conflict as one of the chief "fun factors" in mainstream games. We regard this as a misconception, and believe that it should be addressed directly by the instructor and in the instructional materials.

This can be done by giving students time with a game that is values-conscious and still fun, and that simulates conflict without undermining its socially, morally, or politically-oriented design goals.[2] One game that meets all of these criteria is Impact Games' (2007) *Peacemaker*. It puts players' in the role of either the Israeli Prime Minister or Palestinian President during a time of crisis in the Palestinian-Israeli conflict. Even though players take part in the conflict, including its violent aspects, the game effectively conveys the message that a violent foreign policy on either side will exacerbate the situation. Impressively, it does this through a sophisticated integration of game mechanics and narrative elements that combine to immerse the player in an experience that would not be possible using more traditional media.

Similarly, some games that have been created by students using the VAP curriculum are excellent exemplars of how to dissolve the perceived conflict between values and entertaining gameplay. For example, *Hush* (2007), created by Jamie Antonisse and Devon Johnson at USC, gives players a viscerally engaging experience of the value of empathy.[3] The game uses a singing mechanic to immerse the player in the role of a Rwandan Tutsi mother hiding in a shack with her baby during the 1994 genocide. The mother sings a lullaby to pacify her baby as soldiers pass by outside the window.

If the lullaby falters, the baby begins to cry, and the soldiers may discover their hiding place. The player “sings” the lullaby by typing it at the precise rhythm indicated by on-screen prompts. Players have reported that as they miss notes in the lullaby and the baby’s cries grow louder and the soldiers come nearer, they feel an escalating sense of tension and dread.

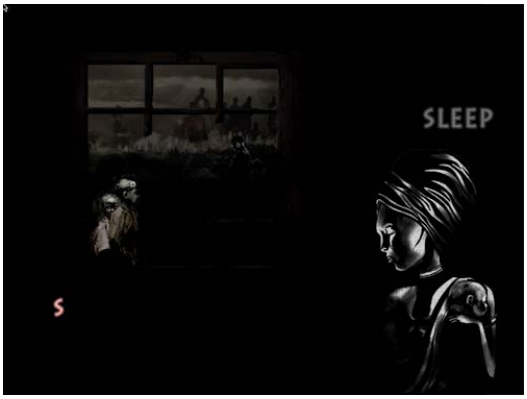

Figure 2: Jamie Antonisse and Devon Johnson’s Hush

Second, our experience has been that both students and instructors tend to automatically associate values conscious game design practices with games that are activist or that address social issues. However, values conscious design has much broader and more mainstream applications. Consider the following example: A web-based consumer electronics guide may inform users of various products’ carbon footprints, but this does not mean the guide is an "activist tool," or that it is only of interest to environmental activists. Rather, it is a mainstream web service in which the value of environmentalism has been integrated. Likewise, though mainstream game designers will probably not count activism amongst their primary goals, integrating values may add rich and interesting layers to their work. Indeed, our findings demonstrate that values conscious design can help designers to reconsider old assumptions, bust clichés, and innovate in exciting ways – these are desirable outcomes in any creative pursuit. Therefore, a priority for current versions of the curriculum is to help students situate values conscious design in the context of developing mainstream, entertainment-focused games.

Another important point is that, although students may begin with the intention of creating a values-conscious game, it may be challenging for them to continually resist the clichés of mainstream games. Using the terminology of the architect Christopher Alexander and his colleagues (1997), it can be argued that traditional design practices constitute a highly limited “pattern language”. This “pattern language” shapes how designers perceive the problems that arise in a given design task, and also shapes the range of solutions they consider to be applicable to their work. A pattern language can be so limiting that those who are steeped in it have difficulty innovating beyond what has previously been done before in their field. In other words, it can cause designers to become mired in cliché.

The students in our focus group were reasonably successful in resisting game design clichés, and maintaining the values focus of their games. However, they were also the students who were most deeply engaged with the VAP curriculum. Other students were less successful, and produced designs that were problematic from a values conscious perspective. Some created games in which particular values were alternately affirmed and violated by different mechanics, features, and narrative elements. This had the effect of muddling any values-oriented messages or intentions. Others began with the intention of affirming particular values as a central aspect of their designs, but ultimately lost this focus as they fell back on more traditional pattern languages. In light of the difficulties some students experienced, we recommend that instructors regularly check up on students throughout their design process, with the specific purpose of reorienting them towards original project goals when they are off course.

Finally, we were enormously impressed by the variety of non-traditional design strategies that students used in their work. In future iterations of the curriculum, we intend to present an even broader range of alternative design practices in the hope that they will inspire students to even greater creative heights.

Conclusion

Our assessment of this implementation of the curriculum was exploratory in nature, and we intend to continue our research using a robust combination of quantitative and qualitative research methods. As values conscious design gains popularity and acceptance within college-level game design programs, we see our work as providing valuable insights for the field as a whole.

The results from this assessment have informed numerous refinements in the latest iteration of the curriculum. We plan to continue this cycle of assessment and refinement as the Values at Play project evolves.

However, future work in this area should not be limited to university design courses, as there is a growing interest in using game design in high school education, and also some interest in the game industry for values conscious games. Taken together, these developments are an encouraging sign that, as a discipline, we're moving closer to considering values as an important dimension of the design process.[4]

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Notes

[1] The Values at Play project is funded by the National Science Foundation. NSF SoD Award No: CNS-061386

[2] On the Values at Play website, we have assembled a library of games that highlight particular values. Some of these games have been developed by students using the VAP curriculum.

[3] Hush is available to play at: http://interactive.usc.edu/members/jantonisse/2008/01/hush.html

[4] We would like to acknowledge the leading role that Helen Nissenbaum has played in developing the philosophical framework and design methodology at the heart of the Values at Play curriculum.