

Games Just Wanna Have Fun...Or Do They? Measuring The Effectiveness of Persuasive Games

Terry Lavender

Simon Fraser University
westcoast@gmail.com

Abstract

How much influence do videogames have on the people who play them? While this topic is usually addressed with reference to violent games, it is also an important issue for the emerging field of persuasive games (which include educational games, advergaming, political games and social advocacy games) – games that deliberately seek to influence and change opinions and behaviours. How effective are these games as agents of persuasion? Because of the interrelationship of factors such as game quality, intent, player predisposition and game message, it's difficult to generalize about their effectiveness. Using a persuasive game that I have created, I intend to try and measure its effectiveness as a social advocacy tool and isolate some of the factors that contribute to that.

Introduction

On September 13, 2006, 25-year-old Kimveer Gill killed one woman and wounded 19 other people in a shooting spree at a Montreal college before killing himself. In his online journals, Gill wrote about his love for certain movies, television shows and other elements of popular culture. But it was the mention of certain videogames, particularly *Super Columbine Massacre* that drew the most media attention and once again raised the issue of how much influence computer games can have.

This is not the first time the issue has been in the public eye. The fact that the perpetrators of the Columbine massacre played *Doom* and even created their own *Doom* levels was widely reported, as was the information that a driver involved in a fatal car crash had a copy of the street racing game *Need for Speed* on the front seat of his car. These incidents, and others have led some media critics and politicians to argue that by virtue of their immersion, realistic graphics, and ability to allow players to experience different roles and scenarios, computer games can influence attitudes and behaviour, whether for good or ill - though in the eyes of these critics it is generally the latter.

The argument presented by *Calgary Sun* columnist Mike Strobel is typical: "How many times must a video game turn up as evidence at a crime scene before we wake up? Dawson College is the latest. Killer Kimveer Gill was a fan of *Super Columbine Massacre*, a lovely bit of Internet fun. 'Life is a video game and you gonna die sometime,' was young Gill's usual blog

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signoff." As do most commentators and politicians who pursue this line of argument, Strobel calls for more control and censorship of videogames (Strobel, 2006).

In response, videogame apologists argue that *Super Columbine Massacre, Doom*, and other so-called antisocial games are just games, and that playing them has no more effect than watching a movie. They say that Gill and others who have supposedly been driven to antisocial acts by videogames would have committed their crimes regardless of whether they played the games or not.

For example, Ian Bogost on the Water Cooler Games site writes: "People like Gill don't kill because they read a particular book, listened to a particular band, or played a particular videogame. They kill because they have a myriad of other problems that extend back in time for years, some of which they express through using and internalizing media. In particular, they often lack support networks, especially during childhood, and they don't develop channels to express their fear, anger, and confusion. The world, as usual, is more complex than we'd like it to be" (Bogost, 2006). But while Bogost's argument is attractive, especially for those of us who enjoy, develop and study videogames, it does lead one to ask: if games don't have a negative influence, does that mean that they also have no positive influence?

Persuasion in Games

A large and growing community of game developers would argue that yes, games can influence attitudes and behaviour. Advergaming, edugames, social and political advocacy games – all part of the new field of persuasive games – have begun to make an impact in recent years. Though the revenues and spread of these games pales in comparison to mainstream games, the movement is beginning to make its mark (Stokes, 2005).

Examples range from low-budget casual games such as *Revenge of the PETA Tomatoes* (created for the People for the Ethical Treatment of Animals website) to multi-million dollar productions such as *America's Army*. In between are games dealing with politics both American (*Howard Dean for Iowa, The Anti-Bush Video Game*) and Middle Eastern (*Under Ash, PeaceMaker*); commercial products (*Spriteball, Absolut Search*); anti-corporatism (the *McDonald's Video Game, Disaffected*); development issues (*Food Force, Peter Packet*) and many more. Canadian game makers have been part of this movement – *Steer Madness*, in which you play a cow fighting factory farming, and *Pax Warrior*, based on the Rwanda genocide, are two Canadian examples of persuasive games.

What these games have in common is that they deliberately try to influence behaviour - to buy a product, to join the U.S. Army, to support UNICEF's efforts, or affect social change. Persuasive games have attracted the attention of media, of academics and of funding bodies (the MacArthur Foundation sent representatives to the 2006 Games for Change conference in New York to discuss possible funding of social action games). But how effective are they?

The statistics are certainly impressive. As of June 2006, *America's Army* users had clicked on the recruitment website (www.goarmy.com) 1.35 million times, and players of the game had logged more than 160 million hours of game time (Clarren, 2006). Meanwhile, the *Food Force* website boasts more than 4 million downloads of the 80 megabyte game (

force.org, 2006). But do these numbers translate into behavioural or attitudinal changes? Is it possible, as videogame apologists argue about Gill and other antisocial actors, that people predisposed to consider the U.S. Army as a career would be more likely to play *America's Army* and click through to www.goarmy.com? And do the kids who download *Food Force* become advocates for famine relief and structural change in food distribution systems? How many of them play the game more than once?¹

When considering the effectiveness of persuasive games, one needs to consider the level of persuasion the game developers are hoping to achieve. Persuasion can be pictured as a continuum ranging from information to action (Fogg, 2003). At one end of the continuum, the persuader is attempting to educate the receiver of the persuasive message about something, such as an issue, an idea or a product. Further along on the persuasion continuum is a change in attitude or belief. Or the persuader may want to motivate the receiver to take action of some sort - to sign a petition, donate to a charity, vote for a candidate, buy a product, or take up arms in a revolutionary struggle.

Usually, the intention of the game developers is clear. According to the A Force More Powerful website, “destined for use by activists and leaders of nonviolent resistance and opposition movements, the game will also educate the media and general public on the potential of nonviolent action and serve as a simulation tool for academic studies of nonviolent resistance” (www.aforcemorepowerful.org). *Food Force* takes a more educational approach, having been “developed specifically to help children learn about the fight against world hunger” (www.food-force.com). And the creators of the *Howard Dean for Iowa Game*, Ian Bogost and Gonzalo Frasca, say their aim was to “help Dean supporters understand grassroots outreach and to encourage them to participate in pre-caucus campaigning in Iowa or in their local area” (www.deanforamericagame.com).

Measuring the effectiveness of serious games would then seem to be determined by the degree to which these goals were met. For example, the effectiveness of the *Howard Dean for Iowa Game* could be determined by surveying those who played the game to see how many went on to participate in the Iowa campaign. Children who played *Food Force* could be tested on their knowledge of the causes and solutions to world hunger. Complicating factors arise, of course. For example, players of the Howard Dean game might have been prevented from participating in the actual political campaign for a number of reasons. The game itself could have interfered with its message in a number of ways such as being too simplistic, difficult to understand, too compelling, too easy. And could one determine how many of those who did participate were influenced to do so by the game? If they were predisposed to play a game about volunteering for Howard Dean, would they not have been more likely to actually volunteer? As Bogost, the game's co-creator, noted with regard to the effect of videogames on Kimveer Gill, “the world, as usual, is more complex than we'd like it to be.” But even granting this complexity, it should be possible to determine in specific cases the effectiveness of persuasive games. Though whether generalizations can be drawn from these particular examples is another matter.

Homeless: It's No Game

I propose to explore the efficacy of persuasive games to change beliefs about a particular issue. I am developing a game about homelessness, a well-known issue that elicits complex and

often conflicting opinions among the general public and is often misunderstood (Toro, 1992). Volunteers will be recruited to undertake a short survey of attitudes and knowledge about homelessness, following which they will play the game. Following the game I will re-administer the survey, with additional questions about the game playing experience. The game, which has already undergone beta testing on the Internet and at a Simon Fraser University's open house, is called *Homeless: It's no game* (figures 1 and 2).



Figure 1. Homeless: It's No Game splash screen.

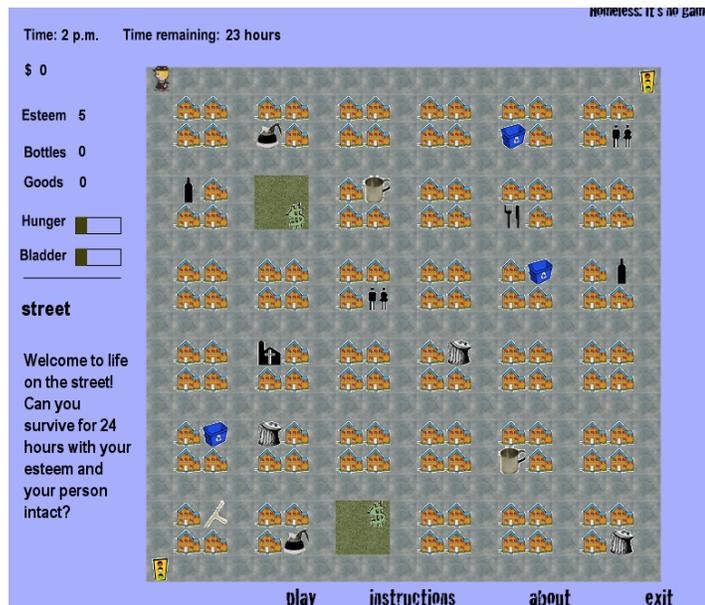


Figure 2. Homeless: It's No Game screenshot

The game, which is being developed in Flash for portability and accessibility reasons, takes place on a two-dimensional finite playing surface. The player assumes the role of a

homeless woman who is trying to survive on the streets of an unidentified city for 24 hours. Her goal is to accumulate esteem points, which she achieves by foraging for bottles and goods to sell, interacting with non-player characters, begging for change, and other activities undertaken in real life by homeless people. Aimed at the casual gamer, it can be played in less than 30 minutes and has relatively simple game mechanics. The hope is that the player will emerge from the game experience with a better understanding of the problems faced by homeless people and with a curiosity as to why and how people become homeless.

Two potential issues are instrument contamination: one is that the very fact of measuring attitudes may influence those attitudes; and the other being the quality of the gaming experience (*Homeless: It's No Game* is a one-person, low-budget effort). I hope to mitigate the first factor by also undertaking random interviews with some of the participants, while the second will be adjusted for by including questions on the game's playability and design.

Whether *Homeless: It's No Game* succeeds in changing attitudes about the homeless or not remains to be seen. And whether persuasive games do, indeed, persuade, is also still open for debate. But with everyone from McDonald's to the U.S. Army to the MacArthur Foundation pouring resources into these games, the question of their efficacy is certainly too important to be ignored.

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¹ Also in question is the reach of persuasive games. With the exception of the U.S. Army and possibly the United Nations, most organizations that create persuasive games don't have the resources to market and distribute their games in numbers anywhere near to those employed by Electronic Arts and other big-league game manufacturers. For example, Steer Madness is available only through a couple of health food stores in Vancouver and Portland and through the PETA website. Revenge of the PETA Tomatoes is only on the petakids website. Who is going to search out and play these games? Only those who are already committed to the cause being espoused?