Designing Games to Foster Empathy

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A diverse range of educational and activist programs have been created to foster empathy in participants. For example, it is often a priority in conflict resolution programs to encourage empathy between stakeholders on different sides of conflicts. Similarly, many interventions designed to reduce prejudice function by eliciting feelings of empathy towards victimized groups. Games are particularly well-suited to supporting educational or activist programs in which the fostering of empathy is a key method or goal. This is because they allow players to inhabit the roles and perspectives of other people or groups in a uniquely immersive way. This paper has been written as a resource for those who are interested in using games to develop or elicit empathy in players. We begin with an overview of what scholars have discovered about empathy, focusing on research in psychology, but also including insights from fields like conflict resolution in which empathy has been an important area of study. This is followed by a set of heuristic principles derived from the literature which are intended to have direct and practical applications to the design of games for good. Finally, we discuss three games – PeaceMaker, Hush, and Layoff – that engage players' capacity to empathize in innovative and exemplary ways.

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Games are often thought of as a purely entertainment-focused medium, but there is considerable and growing interest in harnessing their power for prosocial causes. One manifestation of this interest is the emergence of research projects and organizations that are devoted to developing resources and providing support for designers of "games for good." Over the past three years, the authors of this paper have worked with one such project, Values at Play (VAP). VAP has been devoted in part to assisting students who are interested in creating games that affirm human values like tolerance, equity, and justice. One of our project's main accomplishments is the development of a curriculum to introduce graduate and undergraduate students to this type of design. The VAP curriculum has been used and assessed in several major American game design programs, including at the University of Southern California, Georgia Tech, the Rochester Institute of Technology, and Carnegie Mellon.

Our analysis of students' feedback and work has revealed that they are particularly enthusiastic about designing games to foster empathy. Games are well-suited to this because they allow players to inhabit the roles of other people in a uniquely immersive way. One can read about Darfuri refugees in the news, but, in an admittedly limited sense, a game can allow one to be a Darfuri refugee. Many students using the VAP curriculum have created games (or design documents for games) that are intended to provide players with a vicarious experience of the disadvantages or persecution faced by another group. Some have focused on challenging players' social or political assumptions by allowing them to "see" events or topical issues from perspectives other than their own.

By and large, students' work designing "empathetic games" has been inspiring. This paper has been written as a resource for them, for non-student designers, and for scholars in a variety of fields, including cognitive technology, computer science, and game studies, who are exploring this area through diverse disciplinary lenses.

We begin with an overview of what scholars have discovered about empathy, focusing on research in psychology, but also including insights from fields like conflict resolution in which empathy has been an important area of study. This is followed by a set of heuristic principles derived from the literature which are intended to have direct and practical applications to the design of games for good. Finally, we discuss three games – PeaceMaker, Hush and Layoff – that engage players' capacity to empathize in innovative and exemplary ways.

Empathy

The social sciences have produced a rich and varied literature on empathy, including theory and research on how people experience empathy (Stocks, Lishner & Decker, 2009), whether and how it can be taught (Shapiro, Morrison & Boker, 2004), and its effects on attitudes and behavior (Berenguer, 2007; Nickerson,

Mele & Princiotta, 2008). Empathy is also an important area of investigation in applied fields as diverse as conflict resolution (de Wied, Branje & Meeus, 2007), counseling psychology (Calley & Gerber, 2008), nurse and doctor training (Ancel, 2006; Bonvicini et al., 2009), parent training (Matthey, McGregor & Ha, 2008), rape prevention (Foubert & Perry, 2007), social work (Erera, 1997), and K-12 education (Stetson, Hurley & Miller, 2003). Partly because it has been studied through so many disciplinary lenses, there are a variety of ways in which empathy has been delineated as a concept. In the psychoanalytic literature, empathy is typically associated with the specialized mode of listening through which therapists gain access to their clients' emotional experiences (Aragno, 2008). In contrast, discussions of empathy amongst conflict resolution practitioners often focus on the ability to see issues and events from the perspectives of people on the other side of a dispute (Fisher, 1994; Rouhana & Kelman, 1994). While these two approaches are conceptually related, they are also distinct in ways that reflect the goals of the fields in which they are used. Since games for good are designed to further prosocial agendas in many different fields, it is appropriate for us to proceed with a broadly inclusive definition of empathy. This will allow us to offer design recommendations that can accommodate the priorities of the diverse individuals and organizations who create or support games for good.

Two broad categories of empathy are described in the social science literature: cognitive and emotional (Hoffman, 1987; Stephan & Finlay, 1999). Cognitive empathy refers to the experience of intentionally taking another person's point of view. For example, an American executive trying to understand how her Chinese business partners will perceive a negotiating tactic is engaging in cognitive empathy. Doing this successfully will likely require the executive to become somewhat familiar with her partners' personal and cultural norms, values, and beliefs. Generally, when there are significant differences between people or groups, cognitive empathy can require a lot of homework.

Stephan and Finlay (1999) divide emotional empathy into two distinct subtypes, parallel and reactive. Parallel empathy is roughly equivalent to the lay understanding of empathy as the vicarious experience of another's emotional state. For example, a high school student experiences parallel empathy if he sees a classmate mocked for wearing unfashionable clothes and feels emotions that are similar to his classmate's embarrassment. On the other hand, reactive empathy describes an emotional response that is unlike what the other person is experiencing. If the high school student feels pity instead of embarrassment, this is a reactive empathetic response because he is experiencing a categorically different type of emotion than his classmate.

Before we continue, it is important to note that studies in this area differ along at least two important dimensions.

1. Dispositional vs. Induced Empathy: Some studies focus on how people's attitudes and behavior are affected by their already existing levels of willingness and ability to empathize. Others induce empathy in participants by means of some experimental manipulation or intervention program, and compare the attitudes and behavior of participants who have received the empathy induction with control groups. While both types of research provide valuable insight, induced empathy studies are more directly generalizable to the design of games for good.

2. Low-involvement vs. High-involvement inductions: Most laboratory studies induce empathy in ways that require relatively low levels of cognitive or emotional involvement on the part of participants. For example, in one seminal study (Batson et al, 1997), participants listened to an interview of a young woman who had recently been diagnosed with HIV. Those in the high empathy condition were instructed to "imagine how the woman who is interviewed feels about what has happened and how it has affected her life." While this could certainly be an affecting experience, its impact on participants is limited by its brevity and probably also its remoteness from participants' day-to-day lives and concerns. In other studies, the empathy induction encourages far greater cognitive or emotional involvement. Often these studies are evaluations of real-world training programs. For example, Pinkston (2009) assessed an experiential learning intervention designed to increase medical students' empathy towards HIV/AIDS patients. The participating students adhered to antiretroviral therapy regimens for two weeks using jellybeans instead of real anti-retroviral medicine. Although they did not have to confront the emotional ordeal of living with HIV or AIDS, the program did provoke them to think regularly and over an extended period about the difficulty of integrating a complicated drug treatment regimen into one's daily

activities. Involvement could have been increased further by pairing each student with an HIV-positive patient for periodic meetings. In the real world, both low and high involvement empathy inductions can have practically significant effects on people's attitudes and behaviors, but designers of games for good may find one or the other type of research more directly generalizable to their work. Specifically, the empathy inductions in "low-involvement studies" seem to closely correspond with short activist games that have no community-oriented features, whereas "high-involvement studies" are more equivalent to games that immerse players in an extended experience, particularly those that create relationships between players through some online multiplayer component.

The following discussion will include studies of both dispositional and induced empathy, as well as studies using low and high involvement inductions. Although one category of studies may be most relevant to any particular design project, research in all of these categories has made vital contributions to our understanding of empathy.

Empathy, Attitudes, and Behavior

A consistent finding in the research literature is that empathy improves people's attitudes and behaviors towards other individuals or groups, while a lack of empathy is associated with more negative attitudes and behaviors. Oswald (1996) found that students experienced more empathetic concern when they were induced to attend to and discern either the thoughts or feelings of a prospective adult student. Students who were induced to empathize also volunteered more time to assist prospective students. Batson and his colleagues (Batson et al., 1997; Batson, Chang, Orr & Rowland, 2002) conducted several studies in which participants listened to interviews with members of various stigmatized groups. Participants are asked to either "take an objective perspective toward what is described" or "imagine how [the interview subject] feels about what has happened and how it has affected [his or her] life." They found that instructions to empathize resulted in more positive attitudes towards (and, in one case, more positive action on behalf of) people with HIV or AIDS, homeless people, hard drug addicts, and convicted murderers. When participants in one study were contacted two weeks after the empathy induction, their positive attitudes towards members of the stigmatized group had increased in strength.

In one case, however, Batson and his colleagues (1997) found that instructions to empathize actually worsened attitudes towards a stigmatized group. When women were asked to imagine the feelings of female interview subject who had contracted AIDS through unprotected sex, they expressed more negative attitudes towards women with AIDS than demographically similar participants who were not instructed to empathize. The experimenters argued that if some women participating in the study had previously engaged in unprotected sex, fears regarding their own risk of contracting HIV may have been activated by the interview. This might lead them to adopt negative attitudes as a way of distancing themselves from the interview subject whose life story had become associated with a threat to their well-being.

Dispositional empathy has been associated with a host of positive behaviors, including boys coming to the defense of victims of bullying (Caravita, Di Blasio & Salmivalli, 2008), college students providing assistance to emotionally troubled peers (Mueller, 2002), student helpfulness (Litvack-Miller, McDougall & Romney, 1997), and constructive and non-aggressive responses to conflict (Richardson, D., Hammock, G., Smith, S., Gardner, W. & Signo, M., 1994; de Wied, Branje & Meeus, 2007). Conversely, the research literature implicates a lack of dispositional empathy in many negative behaviors, including child abuse (Moor & Silvern, 2006), sexual aggression (Wheeler, George & Dahl, 2002), and alcohol-related aggression (Giancola, 2003).

The positive effects of empathy go beyond improving attitudes and motivating prosocial behavior toward humans. Berenguer (2007) tested the hypothesis that inducing both cognitive and emotional empathy towards animals and plants could increase people's pro-environmental behaviors. Participants in the high empathy condition recommended that a greater proportion of the university's outreach funds be allocated to environmental causes (thus also advocating a reduction in support to other community initiatives). They also displayed stronger feelings of moral obligation to help animals, plants, and nature as a whole.

A cursory review of the research literature might suggest an almost automatic relationship between empathy and prosocial behavior, but Sutton (1999) provides a fascinating overview of theory and research challenging this assumption. Researchers in developmental psychology have found that some bullies have superior perspective-taking abilities (Waterman, Sobesky, Silvern, Aoki & McCauley, 1981). Sutton argues that this allows them to more effectively manipulate their

peers and harass them in ways that maximize psychological impact. He eloquently describes the paradox of the cognitively empathetic bully as follows: "A single bully and his/her chosen victim often appear to have a bizarre dyadic relationship, in which there may be more consideration of mind than is immediately evident in the bully's behavior … [The bully] may understand emotions but not share them" (Sutton, 1999, p.121). It is plausible that bullies with high perspective-taking ability are pathologically disinclined to feel emotional empathy towards their victims, and therefore represent a special case not easily generalizable to the wider population. Still, designers of games for good should consider the possibility that cognitive empathy may not, in and of itself, generate desired attitudes or behaviors unless emotional empathy is also activated through some mechanism.

Empathy, Prejudice and Stereotypes

People have little inclination to thoughtfully consider the perspectives and experiences of groups towards whom they are prejudiced (Stephan & Finlay, 1999). In other words, they are averse to engaging in cognitive empathy with the targets of their prejudice. In such cases, their perceptions may be shaped primarily by stereotypes. When these stereotypes are negative, they create a self-reinforcing feedback loop: "I dislike group X because they are all dishonest (the stereotype contributes to prejudice). Because I dislike group X, I am not particularly interested in the way they see things (the prejudice discourages empathy, which increases reliance on stereotypes. This in turn reinforces the original prejudice)." This model of how prejudice perpetuates itself is admittedly basic in that it leaves out a host of mediating variables that have been identified as significant in the research literature. Still, it provides a basis for exploring a question that is directly relevant to interventions intended to reduce prejudice. Will inducing empathy render people more willing and able to seek out and accept counterstereotypic information about the groups toward whom they are prejudiced?

Bigler (1999) has written a thorough review of programs designed to counter racism in children over the past forty years. Typically, these programs are strongly oriented towards challenging or offering alternatives to existing stereotypes, with very little or no direct emphasis on inducing empathy in participants. Assessment reveals that these programs have by and large been ineffective, either producing no significant differences between pre and post-intervention measures of attitudes, or yielding effects that are weak or evanescent (Bigler, 1999). A plausible explanation for the failure of these programs is that they do not address the cognitive rationale for why people hold and maintain stereotypes. Stereotypes are a cognitively efficient mechanism for supplying actionable information about the world around us (Macrae, Milne, and Bodenhausen, 1994). For example, it would take a great deal of cognitive effort to evaluate the honesty of every member of group X who I meet in my daily life; however, my stereotype tells me that people belonging to group X are dishonest, and thus obviates the need to judge each member on his or her actual character. A prejudice-reduction program convincing me to abandon my labor-saving stereotypes would have to provide sufficiently strong motivation to do so.

Cognitive empathy could conceivably supply such motivation in prejudice reduction programs. Stephan and Finlay (1999) hypothesize that people who participate in cognitive perspective-taking exercises may come to believe that there are fewer differences between themselves and the targets of their prejudice than they had previously taken for granted. Once a fundamental similarity between groups is accepted it may become difficult or even uncomfortable to think about the outgroup in the unflattering terms dictated by negative stereotypes. Facilitating a perceived similarity between groups may be one of the most powerful mechanisms through which empathy reduces prejudice. A multitude of studies have found that we like people who we consider to be similar to ourselves (Terman & Buttenwieser, 1935; Berscheid, Dion, & Walster, 1971; LaPrelle, Hoyle, Insko & Blumenthal, 1990).

Emotional empathy may also serve as a catalyst in prejudice reduction. When one experiences a visceral empathetic response to another group's plight, this may transform the "emotional lens" through which one views the other group. Emotions commonly associated with empathy, such as concern or indignation, could disincline people to dismiss the outgroup's suffering as a justified result of their supposed negative characteristics. For example, I may become somewhat uneasy with my long-held belief that members of group X are discriminated against in hiring situations because prospective employers know they are all dishonest. Once my stereotypes no longer provide me with a personally satisfying way of viewing group X and their collective experience, I will be more open to discarding them because their utility as a "cognitive shortcut" is compromised.

Interventions in which Fostering Empathy is a Core Method or Goal

Although empathy may be a neglected focus in prejudice reduction programs, it is frequently a core method or goal in interventions designed to change attitudes in a

variety of domains. Foubert and Perry (2007) describe an empathy-based rape prevention program designed for fraternity members and male student athletes. Participants were particularly affected by part of the program in which they viewed a videotape describing the rape of a male police officer by two other males. Their feedback indicates that they were induced to empathize with victims of rape to an extent they hadn't been able to prior to viewing the video. One participant related how while watching the video he felt "frozen like they said young women are in those situations," a remarkable statement of parallel empathy indeed (Foubert & Perry, 2007, p.76)!

Although the program gave participants a jarring experience of emotional empathy, cognitive empathy played a vital role as well. Participants were trained to provide effective emotional support for survivors of sexual assault, and for some at least, seeing the situation from the victim's perspective was an integral part of this. One participant described how after the program, he comforted a female friend who had been raped, and was actively "[trying] to imagine how horrible it must have been for her (Foubert & Perry, 2007, p.80)."

In a five month follow-up survey, a strong majority of participants reported lasting changes in attitudes and behaviors, with some providing concrete examples of how their behavior had been influenced by the program, including confronting peers who told rape jokes, and, in several cases, helping a sexual assault survivor. The program seems to have produced a shift in participants' self-concepts, specifically in regards to how they viewed themselves in relation to rape. Whereas before they had viewed rape as a rare occurrence not directly relevant to their own lives, afterwards they came to value their new roles as awareness raisers in their own communities, and providers of emotional support to victims (Foubert & Perry, 2007).

Eliciting empathy is frequently also a prioritized goal in conflict resolution programs. Kelman (2005) discusses the role empathy plays in "interactive problem solving workshops," which are programs designed to facilitate dialogue between politically influential Palestinians and Israelis, and jointly conceive solutions to the regional conflict:

> [Participants] are encouraged to deal with the conflict analytically rather than polemically – to explore the ways in which their interaction leads to escalation and perpetuation of the conflict, instead of assigning blame to the other side while justifying their own. This analytic discussion helps the parties penetrate each other's perspective and understand each other's needs, fears, concerns, priorities, and constraints. Once both sets of concerns are on the table and have been understood and acknowledged, participants are asked to engage in a non-adversarial process of joint-thinking, treating the conflict as a shared problem that requires joint effort to find a mutually satisfying conclusion (Kelman, 2005, p. 642).

Kelman's workshops use cognitive empathy to encourage (at least a temporary) shift in participants' self-concepts. Outside the workshops, they may be committed to defending their "side" in the conflict, and therefore reluctant to allow for the validity of or make concessions to the opposite position. This kind of defensive posture is antithetical to conflict resolution (Rouhana & Kelman, 1994). The workshops create an environment in which the ability and willingness to understand the other side's perspective is valued as a prerequisite to successful problem solving.

DESIGN PRINCIPLES

In the following sections, we propose a set of principles for the design of games to foster empathy. They are derived from the literature reviewed in this paper, and we plan to assess their efficacy as we use them to guide future design projects.

The creative and open-ended nature of game design necessitates that these principles be applied heuristically. Designers will have to explore for themselves what each one implies for particular design decisions. We expect that each new application will inspire us to add new principles or refine the ones presented here. Thus, we see them as evolving rather than as a comprehensive set of guidelines.

Principle 1: Players are likely to empathize only when they make an intentional effort to do so as the game begins. The game may explicitly ask players to empathize, or it may more subtly encourage them to take on a focused empathetic posture. However, without some kind of effective empathy induction at the outset, most people will play "unempathetically."

This principle is adapted from Stephan and Finlay's (1999) recommendations for creating empathy in intergroup relations programs. Designers may assume the content of their games is sufficiently affecting in and of itself to elicit empathy. However, the research of Batson and his colleagues (Batson et al., 1997; Batson, Chang, Orr & Rowland, 2002) suggests that this assumption is

unwarranted. Recall that in their experiments, participants demonstrated no attitude or behavior changes when they merely watched video interviews of drug addicts, homeless people, and members of other stigmatized groups (though, presumably, this was powerfully affecting content). However, if, prior to viewing, they were asked to make an intentional effort to empathize, then the videos did improve attitudes and inspire altruistic behavior. Correspondingly, games may be more likely to influence attitudes and behaviors when players are induced at the outset to make an intentional effort to empathize.

With reference to games and learning, Solomon (2009) describes a mode of playing he calls "mindful." Mindful players may be highly engaged in the moment-to-moment excitement of a game, but on a meta-level they also continuously reflect of what and how they can learn from the game. People do not normally play mindfully unless prompted by teachers, other learners, or in-game messages. We propose an analogous concept called "empathetic play." Empathetic players intentionally try to infer the thoughts and feelings of people or groups represented in the game (cognitive empathy), and/or they prepare themselves for an emotional response, for example by looking for similarities between themselves and characters in the game (emotional empathy). As with mindful play, we strongly suspect that people will not engage in empathetic play unless they are induced to do so.

"Unempathetic play" may have an effect that is far from what designers of games for good hope to encourage. Imagine a game that immerses players in the role of a refugee camp administrator, who must allocated resources and expand facilities to accommodate a growing population of dislocated people. If the game is skillfully designed, players may become absorbed in the moment-to-moment balancing of resources against needs and time against tasks. But absent an empathy induction, the play experience will probably be roughly equivalent to entertainment-focused simulation games like *SimCity* or *Railroad Tycoon*, which is to say that it will be a well-crafted diversion that for most people is forgotten when the game ends.

Principle 2: Give players specific recommendations about how their actions can address the issues represented in the game.

Although the link between empathy and helping behavior is well-established, there is little research directly addressing the question of how people feel or react when they are unable to help those with whom they empathize. A popular theory is that empathy can be a painful experience in that it compels one to feel the suffering of another person (Schroeder, Penner, Dovidio & Piliavin, 1995). It follows that if one does not know how to help the other person, the pain caused by empathy will have no obvious remedy. Inducing empathy without providing a "way out" of empathetic pain through helping may have negative consequences. Specifically, people could guard themselves against feeling empathy in the future to avoid similarly unpleasant experiences.

In addition, desired behaviors can be modeled through game mechanics. For example, a game about assisting peers at risk for suicide might require players to notice symptoms of suicidal ideation in non-player characters (NPC's). It will often be important for such behaviors to be modeled accurately, which may be a daunting challenge. In this case, how could an NPC be designed so that symptoms like severe anxiety and impaired concentration are manifested to the player in a realistic way? In our experience with student designers, they often fall back on representations that are more iconic than realistic – for example, suicidal NPC's may be depicted as having thunderclouds hovering over their heads. While these kinds of iconic representations are often useful in game design (as when the player character's health is displayed as a red bar that shrinks when s/he takes damage), it should be decided on a case-by-case basis whether true-to-life representations are more appropriate given project goals.

Principle 3: A short burst of emotional empathy works well if desired outcomes to not require significant shifts in how players' beliefs about themselves, the world, or themselves in relation to the world. But if these kinds of shifts are a design goal, the game should integrate both cognitive and emotional empathy.

Imagine you are contracted to create a game for an organization that assists American families living in poverty. The game's purpose is to convince players to donate money through the organization's website. In the game you design, the player character runs a shelter with limited resources. Early play-testers report feeling pity and concern (in other words, emotional empathy) for families who cannot be accommodated by the shelter. How successful will the game be in soliciting donations? This probably depends greatly on players' existing beliefs.

Consider how two players with different belief systems might respond to the game. The first player, Suyin, thinks of herself as a good person, and also believes that good people help others in need. Moreover, she thinks

there are many people in America who cannot afford necessities through no fault of their own, and that these people need help. Convincing Suyin to donate money should be relatively straightforward because this course of action is entirely consistent with her self-concept. In her case, the arousal of emotional empathy through the game activates her already existing beliefs about charity and poverty. Once these beliefs are activated, the act of donating reaffirms her self-concept in a pleasing way: She believes that good people help others in need, and donating gives her concrete evidence that she is a good person.

The second player, Marco, has a somewhat but not entirely different set of beliefs. While he also thinks of himself as a good person, and believes that good people help others in need, in his opinion America is a land of opportunity for anyone willing to work hard. People who are poor are simply too lazy to improve their situation, and "handouts" encourage their laziness. Marco may feel emotional empathy as strongly as Suyin – upon seeing families turned away from the shelter, he worries for their well-being and feels badly for the children. But donating to the organization would produce an uncomfortable incongruity between his actions and his beliefs. Since he believes poor people could improve their situation by applying themselves to finding and keeping steady work, giving them money would make him feel like a "patsy." It seems likely that in Marco's case the game would not produce the desired outcome.

In order to convince Marco to donate money for American families living in poverty, the game would probably have to change his beliefs about poverty. One approach would be to put players in the role of a parent who cannot afford to provide for the basic needs of his or her family. If Marco commits to engaging in cognitive empathy towards the player character, he would likely find that that the situation seems very different from the perspective of an impoverished parent than from his own. Assuming he accepts the accuracy of the game's portrayal, this creates psychological tension that may compel him to act differently than he would have prior to playing. Remember that Marco thinks of himself as a good person, and believes that good people help others in need. If he is open to the idea that poverty is a situation of genuine need rather than being the result of laziness, he may feel compelled to donate in order to maintain his image of himself as a good person.

Although cognitive empathy has the leading role here, emotional empathy can also play an important part. If Marco feels concern for characters in the game (reactive empathy), and/or has some vicarious experience of the family's hopelessness (parallel empathy), this could provide further motivation to consider and commit to changes to his beliefs and actions.

Principle 4: Emphasize points of similarity between the player and people or groups with whom she is supposed to empathize, but beware of provoking defensive avoidance.

We noted before that cognitive empathy may encourage people to perceive others as more similar to themselves, and this in turn could produce positive attitude changes. This process may be facilitated when games highlight specific similarities between the player and people or groups depicted in the game. For example, a game depicting a close-knit family of undocumented Mexican immigrants to the United States might particularly resonate with players who value close family relationships. If I can relate to the immigrant family's values in one area, this may anchor a more holistic consideration and appreciation of their perspectives and experiences. In contrast, if the family's value system is portrayed in a way that makes it seem alien to my own, I may find it difficult to empathize even if I am willing to do so.

There is some danger that perceiving common ground between myself and an outgroup might provoke insensitivity to their plight as a defensive reaction. For example, if I belong to another immigrant group, I may resist identification with undocumented immigrants as a way of reaffirming my identity as a "real American." In such cases, the research literature provides few clues on how to induce empathy.

EXEMPLARY GAMES

The activist design community has produced a number of games in which fostering empathy is either an explicit or implicit goal. In the following sections, we discuss several games that have met this design challenge in innovative and exemplary ways. In particular, we're interested in how their design features have anticipated the principles we've articulated in this paper.

To be clear, none of these games exemplify all of our design principles – indeed, there are no existing games that do. Yet each game we discuss here is a playable example of how one of the principles can be integrated into a larger design. While we try to provide detailed descriptions of the games, as always we strongly recommend that readers play them to fully appreciate what their designers have accomplished. Most are available for free online.

Exemplary Game: Peacemaker by ImpactGames

In Peacemaker, the player inhabits the role of either the Israeli Prime Minister or Palestinian President during a particularly volatile period of the Palestinian-Israeli conflict. Whichever role the player chooses, the goal is to create conditions in which a "two-state solution" to the conflict becomes viable. There are a wide variety of actions to choose from, some hawkish, some conciliatory, some unilateral, and some that require cooperation with groups on the other side of the conflict.

Figure 1. **Screen shot from Peacemaker by ImpactGames**

The game's message can be discerned by contrasting the types of actions that can be successfully used to reach the win state with those that lead to failure. Generally, a hawkish, unilateral foreign policy will exacerbate the conflict, while small conciliatory gestures will build trust between stakeholders on both sides. Small gestures set the stage for more significant peace-building policies which can eventually lead to lasting peace.

The game encourages empathy in several ways. The most obvious is that one can play from either side of the conflict, an especially interesting feature given how many people deeply identify with one side while feeling a strong antipathy towards the other. It is difficult to overstate how strongly a deeply charged political discourse will discourage people from considering the perspectives of their enemies. Especially in regards to the Israeli-Palestinian conflict, prevailing assumptions (on both sides) are that the other side acts as they do because they are in some way morally degenerate, and therefore efforts to appreciate or accommodate their perspective are foolish. Playing PeaceMaker (from the side with which one does not identify) forces one to at least temporarily put aside the notion that one's enemy acts out of sheer malevolence. For example, to successfully play as the Palestinian President, one has to explore the nuances of his or her position. In other words, one has to engage in cognitive empathy. In particular, one discovers that stability and prosperity gives the Palestinian President the political capital to resist extremist militant groups who would otherwise greatly constrain his or her policy options.

Cognitive empathy is involved in gameplay in another way as well. To make progress in the game, players have to consider the perspectives of a variety of stakeholders, rather than only that of their own side. For example, while playing as the Israeli Prime Minister, players will face a violent revolt if their disapproval rating amongst Palestinians increases to a certain level. Reaching a win state from the Israeli side requires both understanding and accommodating the Palestinians enough to secure their cooperation on security policy. More generally, the game requires one to think carefully about the perspectives of a wide range of stakeholder groups, including extremists and moderates on both sides, the United States, and the European Union. Policy decisions that agitate a stakeholder group too much can potentially derail the peace process.

PeaceMaker incorporates real news photos and video footage from the conflict to punctuate gameplay at key points. Often these segments depict the conflict's effect on individual's lives, making it easier to empathize with Israelis and Palestinians on an emotional level. For the most part, the scenes depicted are disturbing – a Palestinian mother weeping over dead relatives, or a public bus in Israel destroyed by a terrorist attack. This provides a jarring emotional counterpoint to the more cognitively-oriented moment-to-moment strategy gameplay.

We consider PeaceMaker to be an excellent example of how our third principle can be implemented in game design. By masterfully intertwining elements that encourage both cognitive and emotional empathy, the game may effectively appeal to people who are usually attracted to more hawkish perspectives on the Palestinian-Israeli conflict.

Exemplary Game: Hush by Jamie Antonisse and Devon Johnson

Hush begins with a screen prompting us to take the perspective of the player character, who is a Rwandan Tutsi mother hiding in a shack with her baby during the genocide of 1994. Against a background of haunting music, this message appears:

> Rwanda, 1994: The Hutu are coming, Liliane. Hide your child. If you falter in your lullaby, he will grow restless. The soldier will hear him, and he will come for you.

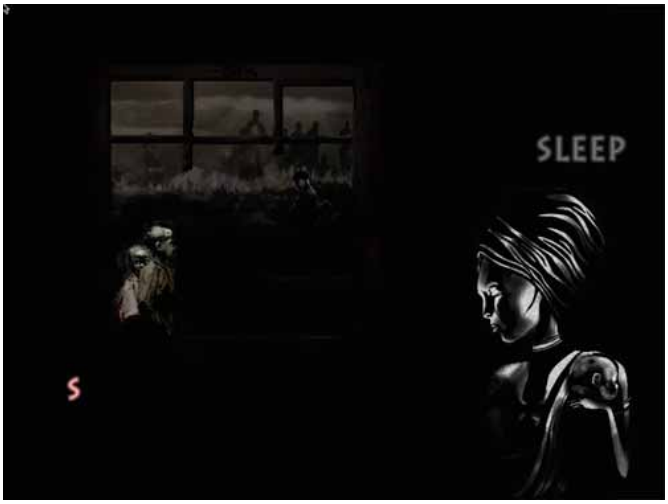

Figure 2. **Screen shot from Hush by Jamie Antonisse and Devon Johnson.**

By addressing the player as "Liliane," the game encourages players to forego the emotional distance that usually separates them from what happens on screen. This can be regarded as a kind of empathy induction (as described in our first principle), in response to which we may be more likely to inhabit, explore, and identify with Liliane's experience. An interesting area for future research will be to investigate what kinds of inductions are most effective. For example, should inductions be relatively subtle (as in Hush), or more explicit (as in the experiments of Batson and his colleagues, where participants were explicitly instructed to imagine the thoughts and feelings of others).

Hush uses a singing mechanic to immerse the player in the role of the player character, a Rwandan Tutsi mother hiding with her baby in a shack during the genocide in 1994. 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.

Eliciting such powerful parallel empathy through a game is a rare accomplishment. In this case, it is probably in part achieved by the game's unusual interaction design. More than in most games, the player's actions closely approximate what the player character is depicted as doing (typing a lullaby to a precise rhythm feels more like singing than, for example, pressing a button feels like shooting a gun or throwing a football). Gaming platforms that allow players to control onscreen action through body movements, such as Nintendo's Wii and Microsoft's Project Natal, are probably particularly well-suited to this kind of interaction design.

Exemplary Game: Layoff by Tiltfactor

Like Hush, Layoff is designed to elicit empathy in players towards characters in the game (and, like Hush, towards the real world people those characters represent). However, it is a very different kind of game than Hush, and elicits a very different kind of empathy.

Layoff is a mod of the casual game Bejeweled, in which players swap adjacent gems on a playing board to create horizontal or vertical sets of three or more identical gems. When sets are created, their component gems disappear from the board and are replaced by new gems falling from the top.

In Layoff, one plays as "corporate management," tasked with cutting jobs during the financial crisis. The playing board is like Bejeweled, except each tile represents a worker instead of a gem. When players match sets of three or more workers, they fall off the bottom end of the board into an "unemployment office." From management's perspective, the workers are interchangeable parts that can be swapped and terminated to save money. The game, however, is designed to challenge this perspective, to contend with the idea that a worker is only a "part." Each worker has a detailed personal biography that pops up when their tile is selected. For example:

> Jaime, 39, is a client relationship manager at a small outsourcing company. This is a new job in Boston, and Jaime likes it very much except for the climate. Jaime works from home on Fridays to ease financial pressure for childcare, but the manager is possibly going to cut all employees down to a 4-day workweek.

Notice that in Layoff, unlike Hush, a bond of empathy is created not between the player and player character (who in Layoff, represents management), but rather between the player and non-player characters (i.e., the workers who are being laid off). Layoff also evokes a different kind of empathy than Hush. Players probably don't feel anything approximating what a worker might feel when s/he loses his or her job (whereas in Hush, you do

experience the same broad class of emotions as the player character). But one might feel indignation at the callousness of management towards their workers, or sorrow for the plight of people who've lost their jobs in a bad economy. In other words, players feel reactive empathy.

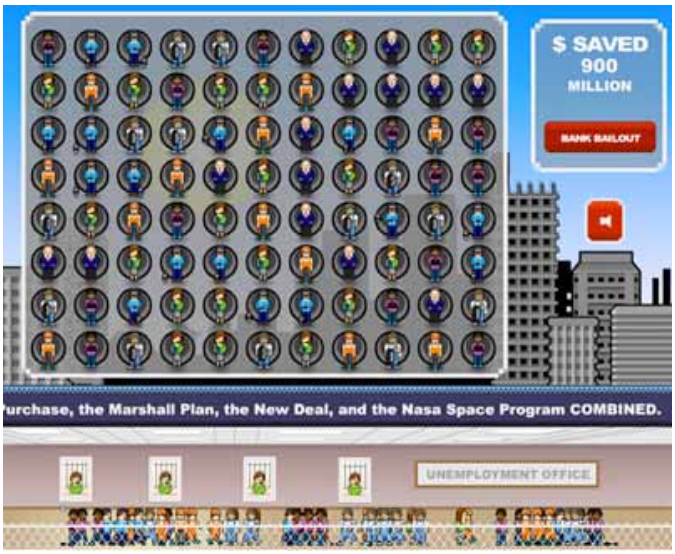

Figure 3. **Screen shot from Layoff by Tiltfactor Labs**

The player experiences reactive empathy when s/he is forced to use information about workers' personal lives to decide whom to layoff. Should I fire Rae the single parent or Kas the depressed divorcee? Obviously, from a business perspective, workers' personal biographies provide little useful insight. But absent any other information, they encourage an emotional response to the human suffering created by the economic crisis.

This emotional response is likely facilitated if the game creates a perceived similarity between the player and the workers (see principle 4). This may happen when players notice some overlap between their own lives and the workers' biographies. Given the sheer amount of biographies in the game and their level of detail, it is likely that many players will find a worker with whom they share some hobby, career ambition, personal situation, or family crisis.

CONCLUSION

The focus of this paper has been translating research-based knowledge about empathy into practical design principles. In future work, we plan to apply these principles in real design situations to test their efficacy. Our long-term goals are to explore how particular design features and strategies are associated with eliciting different kinds of empathy, and to better understand whether and how "empathetic play" influences players' attitudes and behaviors.

More broadly, this line of investigation aims to highlight a sometimes neglected area in technology design. While most mainstream design methodologies include processes for optimizing usability from a cognitive perspective, many do not address the nuances of users' emotional responses to design features. While such considerations are likely relevant in many areas of technical design, they may be particularly essential in the design of games for good.

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