Abstract
Games for change are not primarily made to be fun. While recent research has highlighted their potential to have an impact on prosocial behavior, little is known about the role that positive experiences - or the enjoyment of the game - and negative experiences - such as how uncomfortable or even distressing the game is - has on this impact. In this paper we examine different ways positive and negative player experiences may affect prosocial behavior and discuss the ethical implications for both game designers and researchers exposing players to negative experiences in games for change.

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Introduction
Games for change are games striving to further social change by teaching a message and putting their players in another person's shoes. Being entertaining or fun are not their first priority. As their goal is to highlight social injustice and human suffering, by nature they concern
themselves with themes that may be experienced as uncomfortable, even deeply unpleasant by the player. In addition, in an attempt to illustrate the severity and arduousness of the topic illustrated, games for change will often be quite difficult, sometimes almost unwinnable.

**Positive and negative game experiences**

An example of a game that focuses on an unpleasant subject and leaves its players very little chance of winning is *Darfur is Dying*, but others, such as *Spent*, *Ayiti - the Cost of Life* or *Sweatshop* abound. In a recent study, we were able to show that, compared to non-interactive media transferring the same information, playing *Darfur is Dying* lead to both a higher appreciation of the game and an increase in the percentage participants donated to a charity, *Save Darfur* [9]. Appreciation describes experiences that are gratifying, not necessarily through their entertainment value, but by their ability to be thought-provoking, moving, and meaningful [1, 8]. While in our study we observed high appreciation, at the same time the experienced enjoyment in the game was very low and did not correlate with percentage donated. What remains open now, is the question of whether we would have found the same effects if *Darfur is Dying* had been a more enjoyable game. Would a more enjoyable game have had less of an impact on the players and left them less eager to donate? Or would they possibly have donated more, perhaps if the game had had a more hopeful note? Research on success and failure has found that people are more generous and more likely to donate after winning [5], possibly because they wish to maintain their good mood [10]. Also, a study by Cohen [3] found that the enjoyment experienced while playing *Darfur is Dying* was positively correlated to a higher probability that players, while playing, would share the game on social media - an important factor contributing to the success of a game for change.

On the other hand, Iacovides and Cox [4] discuss the significance of longer term resonance for serious games, i.e. that players remember and are still thinking about a game days later. Different studies have found that people are more likely to remember negative content than positive [6, 7]. Indeed, in the previously mentioned study by Cohen [3], while positive emotions predicted sharing during the game, a follow-up in the two weeks after playing, showed a higher predictive quality of negative emotions for sharing the game in the days following playing the game.

Therefore, even if in the short-term a more enjoyable game for change might leave players feeling more generous and more likely to share it with a friend, it might also make them more likely to forget about it quickly and leave no lasting effect on them.

The question is yet to be answered whether positive or negative experiences - or possibly a combination - are most effective in creating an impactful game for change. As one approach, one of our future studies will focus on the consequence of a simple manipulation of the positivity or negativity of a game experience, namely the game outcome (i.e. whether and how one wins or loses) - on pro-social behavior following the game.

Based on research linking in particular mixed affect to appreciation [1] and our previous findings [9] on the relationship between games for change, appreciation, and donating behavior, we argue that whichever other experiences impact pro-social behavior, appreciation will be of crucial importance in determining the impact of a game for change and should therefore be included in research on the topic.
The ethics of negative game experiences

While debating negative game experiences, the question must be asked, of whether, as a game designer or a scientist exposing a player to a game for change, the hoped-for prosocial impact of the game justifies the possible negative experience, which the player will have to endure. In our study on *Darfur is Dying* [9] for example a participant wrote the following comment:

“To be honest I am feeling very distressed - and I am sorry I completed the survey so late in the evening rather than during the morning. I know I shall have difficulty sleeping tonight because of what I have read here tonight.”

This person donated a hundred percent of their bonus. Even assuming that this was due to the study and not e.g. due to their disposition, this begs the question of whether affecting this behavior, either in the name of supporting the humanitarian aid to the crisis in Darfur or in the name of a scientific contribution, gives us the right to make this person, in their own words, very distressed. While this was one instance in over two hundred participants, this was a thoroughly unwanted effect. We have since discussed adding trigger warnings to our studies to hopefully avoid causing distress to our participants in the future. Games such as *Depression Quest* are already utilizing this tactic.

Sad, but insightful

Besides the above-mentioned negative comment however, we were surprised by the amount of very positive comments praising the study or the interactive text or game, especially considering how low participants rated their enjoyment. One participant for example wrote:

“Quite enlightening to be posed with such questions - forces one to think more intently about the situation using relatively simple methods”.

There were also numerous comments featuring "thought-provoking” and others using descriptors such as "eye-opening and very worthwhile” or “moving”. In a few instances people even mentioned that they were now motivated to read up on the crisis in Darfur or that they wanted to donated more money than they had been able to in the study.

While participants had not found the experience enjoyable, they did appear therefore to have found the experience gratifying and worthwhile. This seeming paradox fits well with the concept postulated by Bartsch, Kalch, and Oliver [1] that people seek out media that makes them “sadder but wiser”, or in other words, media that they appreciate for allowing them deeper insights and furthering personal growth. Assuming that some of our participants had at least to some extent found *Darfur is Dying* distressing, this poses the additional question of whether the personal benefits in terms of these “sadder but wiser” experiences legitimize exposing players to negative experiences.

Conclusion

To sum up, games for change concern themselves with topics that are unavoidably distressing. The question poses itself however, whether this means that the games themselves and the experience they elicit are equally unavoidably distressing. From an ethical standpoint we believe it is important to either endeavour to create games that do not cause distress or to at least warn players in advance so they themselves can decide whether they wish to experience this specific content. Furthermore, from both an ethical perspective and in interest of further understanding how games for change impact players, further research into the connection between negative experiences, such as distress, and of positive experiences, such as enjoyment, on the impactfulness of games for
change would be beneficial. Specifically, the impact of positive and negative experiences (e.g., as instrumentalized by manipulating the game outcome) on appreciation and prosocial behavior could help shed light on the question of whether negative experiences in games for change are crucial for its impact and on the other hand whether positive experiences hinder their effectiveness or whether experiences such as enjoyment could coincide with thought-provoking and attitude- and behavior-changing game experiences.

References


About the author
Sharon Steinemann recently began her PhD studies in psychology at the HCI research group of the University of Basel. Her research interests focus on the potential of media, especially games, to impact prosocial behavior and attitude change.