Beyond Sadness and Smiles: How to Harness the Potential of Video Games for Treatment of Depression

Abstract
This paper is a primer framework to help guide designers of therapeutic video games for depression draw a hard line between awareness and therapy.

Author Keywords
Depression; behavioral health; video games.

ACM Classification Keywords

Introduction
Depression is a common and debilitating mental health problem that affects more than 300 million people worldwide [10]. Our understanding of depression has evolved greatly in the past thirty years due to large-scale population studies and brain imaging, but unfortunately, many myths and stigma persist about this condition, which has accompanied humankind from the beginning of time [1,6]. Depression was first described in the Western world by Hippocrates as melancholia (black bile) at a time when the distinction between body and mind was not widespread. We are steadily returning to the wisdom of those ancient times, armed with better treatments including evidence-based psychotherapies, medications, and...video games [4].
Depression Awareness Versus Depression Treatment: A Distinction That Matters

The well-intended amateur treatment approach for depression is based on an oversimplified public health model of giving someone “information about their condition”. Often described as “death-by-pamphlet”, this attempt may even include entertainment media, such as film or games. The approach may work for showing people who do not have the problem what it may feel like to have it but does little actually to help someone help themselves. Although awareness is nice to have, it is not enough and when you are constantly confronted with it, it makes things worse for the depressed person who may now feel like the spotlight is on them and could become even more uncomfortable than before.

For many people with depression, rejection sensitivity is a big issue. They may withdraw from social settings, and their reduced interactions can become a self-fulfilling prophecy. The hallmark feature of low self-esteem in depression can make other people turn away. The person with depression cannot tolerate rejection or critique and this activates a vicious cycle. The causes for depression are heterogeneous but somewhat predictable and preventable. People growing up in an environment of abuse and/or neglect combined with their own genetic vulnerabilities experience the perfect conditions for depression and other psychiatric conditions to develop. If you are unloved or treated badly, it is hard to maintain a positive attitude over a prolonged period. Resilience is hard enough to cultivate for adults and even harder for adults with a pile-up of childhood adversities [2].

For those who develop depression in later years, I encourage the reader to understand that grief and sadness are a natural response to many things, but in the absence of social support, people often do not recover from such feelings which can spur lasting changes in our biological being (brain structure) and the constantly evolving self (our mind). Although the causes of depression are fascinating, the depressed person will not be helped much by being told about the neurobiology of depression. Depressed people are also good at making themselves undesirable to be around. I frequently assign the short story The Depressed Person [9] because it captures one of the many states of mind of depression so well, one which evokes feelings of disdain, and even disgust and anger from the reader. After reading the aforementioned story, one may conclude that depressed people are awful individuals that we must avoid or abandon at all costs. Such acute awareness of a single experience of depression without a cure coupled with the stigma of “depression contagion” research [5] (and how it is framed by popular press—citation purposely avoided) often lead artists to create “empathic” experiences that can promote compassion fatigue. It isn’t that such experiences are not valuable or that they cannot be transformative, but they are usually brief, rarely do justice to portray the full extent of an experience, such as depression, and may offer simplified solutions. As is the case with Wallace’s short story, too much “authenticity” can sometimes backfire and is best used as an educational versus a therapeutic strategy.

Depressed people may feel sad more than others (not exactly true but they often have the appearance of “looking sad”). Thus some people focus on “un-saddening” them rather than working on the actual cause or precursor to the symptom. This is a subtle distinction, but let’s just say that you cannot cure diabetes once you have it by eliminating or lowering sugar alone, just because the main test for diabetes is having high sugar in the blood. I am
oversimplifying of course. One of the mechanisms of change for depression that have been proven to work is a type of gradual exposure therapy to rejection within a safe environment to help people regain self-esteem. This does not mean telling someone "get out of the house and meet some people and you will instantly feel better". That may work when you're just a little bit down. In major clinical depression, every rejection, real or symbolic, reinforces what one already feels. So if you want to practice “exposure therapy” with your friends, start very small and hold their hand all the way until they are ready to let go.

The Curative Mechanism of Videogames
People tend to equate a theme and story with a game’s therapeutic potential, but in thinking about games as therapy, the core skill is transmitted through the game mechanic. The game mechanic is the main pathway to practice the skill over and over again that will teach you how to get out of your “rut”. The theme and story of a game will help contextualize the game mechanic and make it salient and persistent but this success depends greatly on the quality of the writing. If the narrative is “heavy-handed”, the player will be stuck in nothing more than a low-quality didactic tale. Psycho-educational and bespoke therapeutic games fall into this predicament: despite being somewhat effective they are unlikely to become popular to play [8]. Such games work like school homework and they are tedious because the writing is tedious. Of course, the wrong game mechanic can also contribute to a didactic or tedious game. As designers, we experiment to balance metaphor and concreteness of the game mechanic relative to real world behavior. In other words, this is where all the iteration and testing takes place. There are no shortcuts, no recipes and you will not “fix” nor please everyone with what will result.

Journey (2012) is an unexpected example of a videogame that has been explored as a promising intervention for depression in studies by the Games for Emotional and Mental Health Lab (GEMH Lab). The game’s anonymous multiplayer mechanic enables a situation in which players meet strangers and bond through non-verbal interaction, but newly acquired “friends” may randomly disappear without explanation because they needed to stop playing, or experienced network problems—leaving one to freely wonder what happened to them. This means that one may experience grief, loss, and rejection in small ways, repeatedly, and in the safe environment of this game. You cannot finish the game unless you “move on” from the grief and rejection. The game thus enables coping practice in a direct and meaningful way. What should be obvious with this therapeutic approach is that people who do not have rejection sensitivity related to their depression will not experience the game in the same way. They will not be harmed by it either and may engage in imaginative ways to explain the disappearances of co-players. It helps all players that Journey is a stunningly beautiful game which can generate feelings of virtuous pleasure [3], a much-needed feeling to counter depression in which anhedonia (the absence of feelings) is quite common.

The therapeutic potential of Journey may be applicable only to those for which rejection sensitivity is an issue and who experience such co-player disappearances as rejection or loss because they lack the ability to develop adaptive explanations for things that happen in the world. Depressed people often feel things are happening to “them” and everything is personal. For those who do not have this problem, you can relax: you cannot treat a problem which does not exist. In one
study [7], we found that players who scored higher on depression rated a simulation game that was designed to help them higher on interest and enjoyment. Secondary analyses on the data were prompted because during face-to-face evaluation of the game we visibly observed that some players were much more emotionally moved than others. Although this study screened out participants with moderate to severe depression, those at the boundary of being excluded, who had mild to moderate symptoms of depression, experienced the game as much more salient; those without any signs of depression were either bored or just intellectually curious about the game.

Humans experience games very differently depending on their perceived relevance and value to them, and this can even transcend the manipulation of context, as in where the intervention takes place and what you tell people about it (two studies conducted by Jeffrey Newell and GEMH lab). In conclusion, a really well-made game that is aware of therapeutic mechanisms could benefit a wide audience and do little or no harm.

Acknowledgements
Dedicated to the recently departed Jaak Panksepp whose wisdom guards my sanity, to the students of the USC Interactive Media & Games Division whose provocative work continues to inspire me, and to the students of the Developmental Psychopathology Department at Radboud University whose rigorous work continues to challenge me; to Isabel Granic who has catalyzed these thoughts; to Swann Pichon for secondary analyses on the Helping our Heroes dataset.

References