
Designing for Digital Wellbeing: On Games and Music

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ABSTRACT

In the pursuit of designing for wellbeing, researchers should consider media artefacts that are already being used by the general public to facilitate relaxation, emotion regulation, and psychological need satisfaction: video games. This position paper suggests that research on human-computer interaction (HCI) and games should explore how to explicitly design games for stress relief and prevention, in order to increase individuals' wellbeing. Further, music—as a pervasive component of games, but also prevalent in everyday activities—has great potential for leveraging positive effects on wellbeing through stress relief via gameplay, but also through music listening in general. HCI researchers should consider the exploration of designs and systems that include, incentivize, and enable music listening in everyday life.

CCS CONCEPTS

• **Software and its engineering** → **Interactive games**; • **Applied computing** → *Sound and music computing*.

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KEYWORDS

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INTRODUCTION

Wellbeing, following the definition proposed by the World Health Organization (WHO), constitutes a state in which individuals lead productive lives and contribute socially [16]. Exposure to stress is a large contributing factor to mental health issues and decreased wellbeing, and even correlates with physical health issues [13]. Prevention of stress is thus an important step towards the overarching goal of increasing wellbeing in individuals [15]. I see *digital wellbeing* as directly tied to the WHO definition: a subset of wellbeing insofar as it is influenced by digital technologies and human-computer interaction (HCI). In this position paper, I motivate two different approaches with which HCI researchers may be able to design for stress relief and wellbeing in future systems: by optimizing video games to relieve stress, and designing for music listening in everyday life.

PLAYING GAMES FOR WELLBEING

Almost universally, humans seek out relaxation and measures of emotion regulation in their everyday lives, and one of these measures consists of playing video games [7, 8, 20, 21, 24]. While video games have a poor reputation in some respects (e.g., said to cause addiction, or induce violent behaviour), empirical evidence for these negative effects is sparse, and mediated by the motivations behind playing, requiring a distinction between obsessive play (pathological use) and engaged play [5, 6, 12]. Other studies have found that media exposure in general, and gameplay in particular, are effective tools for stress relief, and can improve affective state, wellbeing, and life satisfaction [8, 17, 18, 24].

Part of the appeal of games is theorized to arise from fulfilling psychological needs for autonomy, competence, and relatedness (i.e., self-determination theory) [4]. The widespread appeal and diversity of games imply that the way in which these needs are fulfilled are highly varied, and have great potential to cater to player preferences. Many games and game mechanics are designed specifically for a relaxing experience, for example, casual games and pottering mechanics [9]. Further, flow theory implies that even very challenging games also lead to engaging and rewarding experiences, as long as the challenge matches players' skills [14]. Player anecdotes indicate that stress relief through gaming as found by general games research also applies to challenging and even frustrating gameplay [3, 22]. As such, I see one future approach towards designing for digital wellbeing in the games research

context: *i)* the exploration of effects of existing games on wellbeing, and *ii)* using insights derived from this to inform game design and development to maximize these effects. For example, games should be designed to maximize fulfillment of needs satisfaction according to self-determination theory.

MUSIC FOR WELLBEING

Music has an extensive history of being used for relaxation, pain relief, and emotion regulation, in clinical/therapeutic settings as well as leisure scenarios [1, 10, 11, 23]. Given this potential in reducing stress and increasing wellbeing, music can be considered a potential factor in the above-mentioned approach to designing digital wellbeing in the future: how can we design background music in games to leverage positive effects on wellbeing? Research has shown that background music affects player immersion and enjoyment, but its contribution to wellbeing has yet to be explored empirically [19].

Beyond its place in games research, I argue that music can also subsist its own, more general approach to designing for wellbeing in HCI. HCI researchers aiming to reduce stress in individuals should consider how to incorporate music listening into their designs and systems, in order to encourage users to include music in their everyday lives. Researchers are already exploring effects of interactive installations in public spaces [2]; the addition of music may be a contender for future research into developing spaces for stress relief in everyday life (e.g., within the workplace). There are of course settings in which music can be disruptive or socially inappropriate, limiting this approach to specific scenarios. Nevertheless, the documented benefits of music imply a significant potential for this approach to wellbeing.

WORKSHOP CONTRIBUTION

Given the widespread popularity of playing video games and listening to music, I believe that there is significant value to exploring how games and (game) music can contribute to stress reduction and prevention, in order to increase individuals' wellbeing. With my background in games research, I am curious to learn about other perspectives on designing for wellbeing. I hope to leverage the interdisciplinary character of this CHI workshop to gain insights and potential collaborators to pursue games and/or music-based approaches to designing for wellbeing.

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