Social Health Games for Wellbeing: A Methodological Approach

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ABSTRACT
Serious games for health are interactive digital games with a focus on health care, physical and mental fitness. While most health games focus on teaching knowledge and prevention topics, others are directly aimed at strengthening patients’ motivation to attend a specific medication/therapy or to change behavior in order to live healthier. However, as it is assumed that social support can also indirectly influence a person’s health condition, multiplayer health games present an innovative approach of fostering players’ health condition. Especially taking into account that by fulfilling the inherent need for interpersonal relationships (need to belong) subjective wellbeing can be fostered. Nevertheless, specific game components that are able to influence the affiliation motive have not yet been identified or examined in detail. In this paper, we argue that the fulfillment of the need to belong by means of interactive games will lead to increased wellbeing and health. Based on this we present a concept to investigate the influence of different interaction styles in digital games on players’ need to belong motive-fulfillment and subsequent subjective wellbeing.

Author Keywords
Health games, need to belong, social interaction, wellbeing, player experience, game design.

INTRODUCTION
Need to belong is the individual wish for meaningful interpersonal relationships and presents a relevant basic human need [2]. As research suggests that persons engaging in qualitative meaningful social interaction experience higher wellbeing and better health condition [2, 5], media applications fulfilling the need to belong may automatically foster individuals’ wellbeing – especially if social interaction needs are not being met. In this context digital media offer a possibility of equipping socially isolated target groups with a communication tool for staying in touch with friends and establishing contact with new acquaintances. In addition to information online communities for supporting social interaction [14], digital games have also demonstrated to be beneficial for interconnecting socially isolated target groups. First attempts to do so have already been established for cancer diseased children [8] and seniors [12]. Although the possible risk of computer-mediated communication causing social isolation among specific target groups has to be acknowledged [4, 15], digital games may still present a promising approach for fostering the need to belong fulfillment. This can be attained by several ways due to the manifold possibilities of designing player interaction and experience: e.g. it can be differentiated between cooperative and collaborative play [19], between games played co-locatedly and games played together online [10], as well as across the number of players who are participating [9]. However, little research regarding the mechanisms underlying the positive influence of computer mediated social interaction has been conducted yet. In this paper we suggest an approach addressing these different game design components and examining their influence on players’ need to belong and wellbeing.

THEORETICAL BACKGROUND
Ever since Pinel postulated the positive influence of social interactions on the progress of psychic diseases [11] at the beginning of the 19th century, social bonds count as determinants of wellbeing and psychical health. This notion has been adapted in contemporary health models [1], stressing the importance of social support for developing and maintaining physical health. For some research groups [2, 13] meaningful interrelations and the individual wish for affiliation may even present a basic human need that has to be fulfilled: the need to belong. Concerning this matter, researches have further been able to empirically demonstrate the existing relationship between social interaction and subjective wellbeing [6] as well as low mortality rate [3]. Moreover, meta-analysis data reveal the positive impact of social support on diverse health parameters (e.g. cardiovascular, neurocrinal and immunological system) among diverse age groups [16]. On the other hand, being excluded from a social group can also have dramatic consequences on person’s emotional state, wellbeing and self-esteem [18]. Therefore social games and

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the inherent mediated social interaction [17] offer a powerful tool for assuaging someone’s need for affiliation and improving his/her physical and psychical health condition.

CURRENT WORK
Previous and current work consists in the development of two casual and health game prototypes for children undergoing cancer treatment [7, 8]. While the game Cancerikum is a casual social game set in a fantasy fiction narrative combining different mechanics for synchronous and asynchronous communication as well as cooperative and competitive game features, Adventures in Sophoria is a multiplayer online role-playing game offering several communication tools. In both games, social interaction is expected to influence patients’ wellbeing and by this means enhance players’ psychological and physical health. Regarding the positive effect of game mediated social interaction on players’ wellbeing, first experiences have also been achieved with elderly players [12]. All in all, our research indicates that digital games played in a social context might be a powerful instrument for influencing individuals’ wellbeing, especially for socially isolated groups.

FUTURE WORK
Future work regarding digital game design for socially isolated target groups is aimed at the investigation of the influence of player’s social interaction quality on player experience and wellbeing. Social interaction quality is expected to vary according to game modes (cooperative vs. competitive) and the perceived presence of interacting partners (online vs. offline). In order to investigate the influence of different game components, it is planned to design and implement a serious game supporting different play modes based on a modular framework. The idea is to keep all game aspects constant while just varying the aspects of social interaction quality as mentioned above. Evaluation results will reveal the effect of specific game elements on players’ need to belong fulfillment and the related improvement of wellbeing and health. This, in turn, will allow recommendations for future social game design.

REFERENCES
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