Musical Embrace:
Exploring Social Awkwardness in Digital Games

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ABSTRACT

Socially awkward experiences are often looked upon as something to be avoided. However, examples from the non-digital entertainment domain suggest that social awkwardness can also facilitate engaging experiences. Yet there has been little research into exploring social awkwardness in digital games. In response, we present Musical Embrace, a digital game that promotes close physical proximity through the use of a novel pillow-like controller to facilitate socially awkward play between strangers. Through our observations from demonstrating Musical Embrace at a number of events, we have derived a set of strategies to engage players by "facilitating social awkwardness", allowing players to "transform social awkwardness" while also letting players "take control of social awkwardness". With our work we hope to inspire game designers to consider the potential of social awkwardness in digital games and guide them when using it to facilitate engaging play experiences.

Author Keywords

Social awkwardness; exertion game; digital play; body contact; tangibles; uncomfortable interactions.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

Digital games are generally considered as offering positive entertainment and engaging experiences. In contrast, social awkwardness is often considered a negative experience that can involve stress and even lead to mental and physical suffering due to fear and anxiety [1]. However, interestingly, research suggests that uncomfortable interactions, such as interactions facilitated by social awkwardness, could help designers realize positive values related to sociality and, in particular, enhance the entertainment experience as opposed to

Figure 1. Two players experimenting with socially awkward interactions

diminish it [1]. This is explained by our fundamental need for stimulation, arousal and excitement, satisfying our desires for thrill [1]. Inspired by these investigations, we present an exploration of social awkwardness that aims to enhance the digital game experience. In particular, we focus on social awkwardness arising from physical proximity, which we call bodily social awkwardness. If we look at the non-digital domain for ways in which games can benefit from bodily social awkwardness, we see games such as Twister, which was originally criticized for being a board game that uses human bodies as playing pieces [2]. However, we believe it was precisely the close physical contact and the awkward bodily positions resulting from playing that lead to its success. Similarly, in Spin-the-Bottle, teenagers challenge each other to actions that are often resulting in bodily social awkwardness as part of play. In both of these games players willingly engage in socially awkward bodily interactions in order to gain the opportunity for an engaging play experience. We are inspired by these success stories, and aim to build on this idea of bodily social awkwardness in order to explore novel digital game experiences.

We created Musical Embrace (see Figure 1), a novel digital game that promotes close physical proximity between players that can result in bodily social awkwardness as a means to facilitate engaging play.

Players must collaboratively apply strong pressure to a suspended pillow-like controller, using only their torsos, in order to move through a virtual play environment. Based on observations from three events and the design knowledge that was developed through creating Musical Embrace, we have derived a set of design strategies, which form the main contribution of this paper. These design strategies aim to support designers who hope to facilitate socially awkward digital play that engages players as opposed to drives them away.
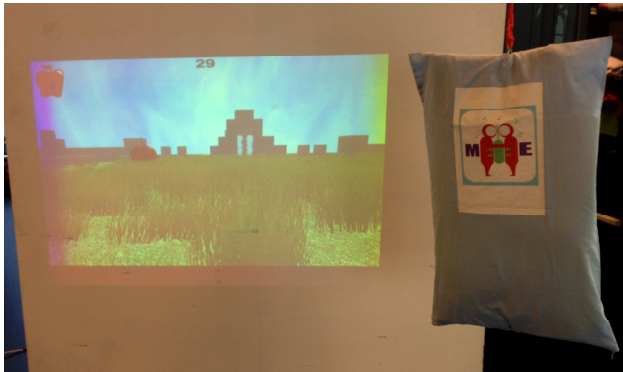

Figure 2. Musical Embrace uses a novel suspended controller to navigate a virtual environment on the screen.

RELATED WORK
Therapy works such as Balaam's [3] suggest to us that technology can be useful when it comes to supporting and understanding social interactions that are challenging (for example, shyness resulting in social awkwardness). Furthermore, research projects with an arts focus have provided installations where technology has been utilized to heighten social awkwardness, for example see [4]. These projects suggest that digital technology can help facilitate social awkwardness, which in turn can significantly shape the experience. We draw from these and bring this knowledge into the digital game domain.

If we look into the digital game domain, we note that platforms such as the Wii, the Move and Kinect, could offer opportunities for social awkwardness due to the bodily interactions they support. However, due to the sensor technologies deployed and the interactions typically afforded, such as arm swinging, players are required to stay physically apart, limiting opportunities for social awkwardness to occur as a result of bodily proximity. We see this as a missed opportunity for supporting social awkwardness, and in response, have explored how to repurpose some of these technologies to engage with bodily social awkwardness.

There are some game examples that have recently emerged that play with the idea of bodily social awkwardness, for example see the iPad game Fingle. Players touch each other's hands as they try to keep their fingers on certain spots on the iPad [5]. Fingle demonstrates that bodily interaction can be encouraged through collaborative game elements, and that social awkwardness can be utilized to create engaging social play. Our project seeks to create more intense bodily contact (building on Wilson's idea of abusive game design [6]), as well as critically examine the impact of such interactions on the overall experience.

From the Mediated Body project we learn that an important aspect of social awkwardness can be the relationship between players. Playing the Mediated Body involves touching a stranger, which can be socially awkward, but the authors found that these socially awkward interactions can lead to "performative and behavioral immersion" between the participants [7]. This project reminds us to consider any personal relationship between players, while the idea of proxemic interactions [8] inspires us to consider the spatial relationships between users as well as any system components as a design resource.

In sum, although interactive systems have previously supported bodily interactions and created social awkwardness amongst players, there is a lack of knowledge of how to design digital games that can engage bodily social awkwardness for engaging gameplay. In response, we present Musical Embrace, a novel game that functions for us as a research vehicle to explore bodily social awkwardness in digital games. From the insights gained through designing and exhibiting Musical Embrace, we hope to guide game designers who aim to utilize bodily social awkwardness in digital games to facilitate engaging play experiences.

MUSICAL EMBRACE
In Musical Embrace, two players enter the game space, which includes a pillow-size controller hanging from the ceiling and a large screen (situated to the side of the players), which accommodates the virtual component of the game (see Figure 2). To create our pillow controller, we used the sensors of a Nintendo Wii Balance Board that we encased in foam padding and wrapped with custom made clothing. Players are invited to apply pressure to the pillow, but as it is hanging off a rope, they are required to do so from opposite ends, at the same time. The players are only allowed to use their torsos to touch the pillow; no direct hand contact is permitted, but they can use their arms to embrace the other player to intensify the pressure.

The pressure applied to the pillow is also important as the players navigate a virtual world on the screen that contains sound sources players need to reach. By applying pressure to the four corners of the pillow, the players navigate from destination to destination, hearing different sounds when they get closer. By applying different pressure intensities, players determine the speed at which they travel. The objective is to navigate to as many sound sources as quickly as possible. After a minute, the game

ends and the players are presented with the number of destinations reached.

Participant Experience of Musical Embrace

Musical Embrace has been presented at an open house event, a game design industry conference and two research conferences. Those who participated were part of the game design field or shared related interests. We observed 95 people engaging with the system, where at least 2 (often 4) of the researchers were present. Using observations from such semi-public settings for analysis has been previously demonstrated to be successful in HCI [9].

We noticed that due to the game's unusual setup (i.e. having the game controller suspended from the ceiling with an accompanying screen to the side), the curiosity of people entering the game space was easily piqued. This led to participants coming forward to play. However, upon being briefed and receiving a quick demonstration, players usually laughed and displayed feelings of uncertainty, as they were often not quite sure of the sorts of interactions expected of them. Yet players often quickly appeared to become at ease and inclined to play the game.

We encouraged participants to play with a stranger, explaining that this would make "for a better game experience". In earlier stages of play, we observed players being unsure of the interactions that their partner would engage in and permit. We then often noticed a particular moment arising where the anticipation build up in the previous stage turned into the "actual experience" [1]. Players beginning to act upon the pillow in order to navigate the virtual play environment usually characterized this. We observed many players laughing, yet often nervously, when they discovered bodily actions together that resulted in triggering a sound destination. Upon understanding the kinds of unusual interactions necessary for navigating the virtual environment, players began exploring new and interesting ways of interacting, such as bending their torsos back or circling the physical game space, whilst embracing their partner.

The typical ending that we witnessed included participants engaging in dialogue where they often reflected on their social play experience: "It was exciting to start, a little bit difficult to control, mostly awkward once I realized others could be watching", "It's nice; it stimulates co-operation on a physical level". Participants also noted how the overall awkward feeling changed throughout play: "It was only awkward in the beginning, then it got more 'normal'".

STRATEGIES FOR SOCIAL AWKWARDNESS

Designing for social awkwardness is not easy, and it took us many iterations, playtesting sessions and discussions to get to a stage where we engage players through social awkwardness as opposed to drive them away. We documented our design process and by reflecting on what we have learned, together with our observations and experiences from exhibiting the game, we have derived a set of design strategies for designers interested in utilizing social awkwardness to facilitate engaging play experiences. In particular, we believe designers should design for the brink where the experience is socially awkward, but just not so awkward that it drives players away. We now discuss strategies how to achieve this balancing act. In particular, we identified three core themes of how to engage players with social awkwardness: by *facilitating social awkwardness*, allowing players to *transform social awkwardness* while also letting players *take control of social awkwardness*.

Figure 3. Two players turning social awkwardness into a public performance.

Facilitating social awkwardness

Strategy 1: Use hardware to set up socially awkward bodily situations

The setup of our pillow-like controller, (i.e. it hanging off a rope) implicated to potential players that they require a partner to collaboratively apply pressure to the board's sensors from opposite sides to progress through the virtual environment. As such, the hardware was used to set up the socially awkward bodily situation of being physically very close to a stranger, and hence we recommend this strategy to *facilitate social awkwardness*.

Strategy 2: Map socially uncomfortable movements to rewarding virtual actions

Players moved their bodies in socially uncomfortable ways to traverse the virtual world. We found that our game benefited from having an unusual mapping of bodily to in-game movement, for example, players twisted their hips to go back in the virtual world. The rewards in the virtual world gave the players an "excuse" for their socially uncomfortable movements, whilst also encouraged players to experiment with and explore the set of actions available to them. One strategy to *facilitate social awkwardness* is therefore to map socially uncomfortable movements to rewarding virtual actions.

Transforming social awkwardness

Strategy 3: Use the controller to allow players to convert socially awkward actions

During play, participants progressed from awkward pressing actions to engaging in gestures that were reminiscent to an embrace, ultimately resulting in a hug. As players were not familiar with the new controller, they were required to "acquire skill with the interface through observation of others and trial and error" [10]. This support for trial and error allowed players to convert their socially awkward actions into more socially acceptable ones: instead of simply pressing torsos together, players labeled their actions as hugs (hugging a stranger is usually not acceptable; however, having played together for a while, the stranger often became a "friend" that could be hugged). One strategy is therefore to use the controller to allow players to *transform* socially awkward actions.

Strategy 4: Allow players to turn social awkwardness into a public performance

The public setup of the game allowed players to perform to an audience (see Figure 3), which more extrovert participants particularly enjoyed. Performing to an audience was also a way for players to experiment with social awkwardness, for example one man lifted up a woman to turn the nature of the experience into one in which he became a public performer. The public setup of the game enabled players to become what Sheridan et al. describes as being "witting participants" who are individuals that are aware of having stepped into Gregory Bate's performance frame, which is the context where the rules of behavior are bound within a particular performance [10].

Taking control of social awkwardness

Strategy 5: Utilize virtual world on screens to reduce social awkwardness temporarily

The existence of the screen not only served as a display for the game, but also became a social sanctuary for when the experience became too awkward. Players found that they could take control of social awkwardness temporarily by redirecting their attention from the uncomfortable interaction and focus, instead, on traversing the virtual world.

Strategy 6: Convey to players that they can quit at any time

Playing a game is a voluntary activity [11], hence it is important for players to know that they can quit at any time if the social awkwardness becomes too taxing. The walk-up-and-play setup of the controller conveyed to participants that they could engage and disengage with the game at any time, all within the constraints of the social contract between the players of course [12]. However, this is in contrast to being physically unable to quit, for example we can imagine a bodily socially awkward game where you are strapped into a harness like on a rollercoaster.

CONCLUSION

Through our participant observations and knowledge gained through creating the game, we identified a set of design strategies to engage players by *facilitating social awkwardness*, allowing players to *transform social awkwardness* while also letting players *take control of social awkwardness.* With our work we hope to guide game designers, who aim to create games around social awkwardness, to consider the potential of social awkwardness as a means to facilitating engaging play experiences. As such, we hope to contribute to our understanding of the ways in which interactive technology can support us when we play with each other.

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