How to Stop Being a Buzzkill: Designing Yamove!, A Mobile Tech Mash-up to Truly Augment Social Play

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Abstract
Most technology-supported dance games result in gameplay that looks very different than what we know as social dancing. For that matter, most ‘social’ games can involve a lot of solo staring at screens. Our lab re-examined the role of technology in supporting the dance experience, working with indie game developers and dancers to understand how to truly augment instead of override the joyful social and physical qualities of dancing together. Along the way, we learned some valuable lessons about how to reframe the conceptualization and development of mobile apps meant to augment everyday social experience. In this talk, I’ll share these insights, toward opening your eyes as you tackle these kinds of design and development challenges in next-generation mobile applications.

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Introduction

Technology has become deeply intertwined with our everyday social connection. We share stories, images, gossip with one another through our mobiles and computers, and spend a significant chunk of our free time with those we care about, sharing screen-based experiences such as movies and games. Yet there is a sense of increasing isolation and the ebbing of social connection in modern life, which is sometimes blamed on technology (e.g. figure 1). I believe this is because we have neglected some of the fundamental aspects of human social connection in the assumptions designed into the experiences we create and the platforms for which we craft them. This keynote uses the development of Yamove! a technology-augmented social dance experience, to point to an alternate path.

Connection with others, in the absence of technological augmentation, happens through shared physical experiences of one another and the world around us, unfolding moment by moment. Preparing and eating a meal, taking a walk, playing tag. In these situations, we become closer through the sharing of activities, and also through close observation of and coordination with one another. We learn what makes the other person laugh, how they startle, the cadence of their steps. We see what moves them in the world, and what their physical skills and tendencies are. She chops onions so quickly and smoothly; he picks up a pinecone and hands it to someone else on the hike to admire; she has a wickedly long reach and can dodge through trees faster than you’d expect from looking at her. None of this is necessarily expressed in words or is even ready-to-mind in the form of words, this mutual experience. It is not entirely goal-focused, and does not lie only with the individual, but rather among those present. It gives us a deep sense of pleasure and belonging—it is valuable and real. Is there a way for technology to gracefully augment such experiences? My lab group is deeply interested in this question, and more generally, in the question of how we can broaden the social and emotional palette of everyday technology design to better support human beings as we feel and express and interact [1].

Considering Social Dance

Dancing together is popular across cultures and time periods—it is a pleasure to show our own physical grace, but also to deepen our connection with others through moving together, and to be carried away by the music as a group. Unsurprisingly, some of the best-selling movement-based games for console platforms such as Wii and Kinect are dance games (e.g. Dance Central and Just Dance). But close observation of gameplay shows something quite different than what happens in a dance club or drawing room. Instead of looking into one another’s eyes or watching one another’s bodies, for the most part participants are staring at the ever-changing graphics and feedback systems on a large shared screen. The ebb and flow of the dance is circumscribed by negotiations about track selection, and choosing of individual difficulty levels. To dance well is to imitate an on-screen avatar as faithfully as possible, and thus to receive the highest number of points individually. It’s difficult to look graceful while mastering the moves and progressing through the game’s tracks and difficulty settings, and impossible to monitor others’ reactions to your own dancing and also focus on what is happening on screen.

Figure 1. Common critique of mobile application users and their lack of social interaction in the ‘real world’.
The technology is fragmenting shared social attention and rewarding players for only some parts of what is engaging about the social dance experience. We can do better, given technologies we have ready-to-hand.

**Designing Yamove!**

We began with the premise that we wanted to get players away from staring at the screen and looking at one another instead. We also knew we wanted room for creativity and individual expression, yet the heart of the game should be cooperative movement.

We were inspired by indie game developers in NYC who curated an exhibition that we took part in called F%!k the Screen (see figure 2). The games at this exhibition got players moving wildly together and really expanded the terrain of motion gaming. For Yamove! we took as a social frame [2] the b-boy style dance battle, in which dancers compete in an improvised way to music mixed by a dj, within a circle of both audience members and fellow competitors (see figure 3). Instead of dance solos, we framed up the core battle in our game as a 3-round competition between two pairs of dancers.

Yamove! players wear iOS mobile devices on their wrists (figure 4a), and take turns dancing short rounds. We use the accelerometers in these devices to measure how vigorously they move (intensity), how closely their movements mirror one another’s (synchrony), and how much they vary their movement (diversity). The final score for a round is an amalgam of these three variables (figure 4b). Pairs get coop scores (there are no individual scores in the game).

**Figure 5:** Teams face one another on platforms, lined up in front of a large shared display. A dj shouts out feedback to the players so they can focus on dancing.

We put a lot of thought and iteration into staging Yamove! to inspire and support coop dancing as a pleasing social play experience and as a spectacle for others (figure 5). Players stand on platforms that face one another, and there is a large shared display at one end of the room that gives everyone in the room quick feedback about how the teams are doing (the mobiles transmit scores to a server via wireless). A dj mixes
music, and shouts out the feedback on the big screen to players, so they can focus on what they are doing during a round. Transitions are controlled by an operator, who uses an iPad to trigger rounds—this provides more flexibility in timing starts and stops depending upon what is happening in the room. We also have a dancer on hand who can model some simple moves for players who are nervous about getting going (like the swim or air guitar). Players can do any move they like, so long as they do it together, and keep it lively and mix up moves that they perform.

Yamove! uses a combination of setting, human roles (dj, operator, and dance model), and a mash-up of technologies (iOS mobiles, big screen and website, iPad to control rounds) to create a dance experience that captures more of what people love about social dancing. In looking over footage from many rounds of playtesting at venues all over NYC, as well as at the two venues where we officially hosted the game—NYU Game Center's No Quarter Exhibition and the World Science Festival, we saw a broad range of move choices, and a great deal of eye contact between players as they put together and tuned the timing of their moves (see figure 6). The eyes of the audience were far more often on the dancers than on the big screen, and the rounds flowed smoothly without the need for players to navigate track and difficulty menus.

Conclusions
To create Yamove!, we began with a core social experience we wanted to augment, and used the indie game developer approach (many rounds of testing in heterogeneous environments, frequent iterations, and consideration of the social frame). We settled upon a mash-up of tech platforms as well as human support roles, to create an optimal end experience. The core of the game is a mobile app, but it is one part of a ‘kit’ that includes various technologies and familiar social roles. Yamove! allows for creativity and improvisation, providing a rule structure that does not force players to overadapt to the technology itself. We believe our approach and results have value for others developing mobile applications and services who are trying to truly augment social experience.

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References