

MEANINGFUL PLAY

HOW PLAY IS CHANGING THE FUTURE OF OUR HEALTH.

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INTRODUCTION

Youth and adults are adopting complacent sedentary life styles that replace activity. This paper proposes that the incorporation of products developed with meaningful play in mind will be adopted into daily routines and can play a significant role in changing future health trends. It is understood that a category of products can not solely rectify the situation, but the information these systems provide can lead to an improvement of health.

THE IMPORTANCE OF PLAY

While play is not a new topic, there has been a recent resurgence with new application to products that provide playful approaches to promoting physical activity, healthy lifestyles, and choices that contribute to improved health. These new approaches are helping to redirect current obesity trends. Observation of usage and documentation of images from selected product communities will be used to identify and illustrate the product's play and usability. Attention to the application of playcentric theories will be shared.

PLAY

Salen and Zimmerman in *Rules of Play* established a loose definition of play incorporating three categories: game play, ludic activities, and being playful (Salen, 2003). Deterding further defined the definitions of play into playing and gaming dimensions and then further differentiated the ludification of culture to create a definition for gamification (Deterding, Dixon, Khaled, & Nacke, 2011). These efforts have help to establish a better understand of the realms in which each concept operates. However, beneficial for gamification, the later classification and isolation of playful interaction is to restricting and does not fully take into account the overlapping fringe areas where artifacts and application of user experience function as one system. This research will attempt to open further discussion on the overlapping areas between ludic activities and being playful. This research is concerned with understanding how these systems enable behavioral modifications to happen. This material will address how to consider playcentric research and the purposes for which a designer/researcher may want to conduct it. It also focuses on how this type of research operates with other research methods such as PLEX to create a holistic understanding of the user and research subject.

“At its core, play is not about any tool or object – a toy or game -, but about this ability to reframe one’s attention around a voluntarily chosen, self-defined activity, goal, challenge, story, in which one may

experience, freedom – to either master it (which would be more graceful) or creatively explore its potential (which would be more playful)” (Csikszentmihalyi, 2008).

Nietzsche and Husserl have proclaimed that play is a fundamental activity of man, and that play’s back and forth movements encourage the encounter and exchange with the world in which man is continually engaged. That said, play requires more than mere random participation, it’s a structuring activity which shares a relationship with the structures that result from it. It is an activity out of which understanding comes. The concept of play involves two influential levels, namely desire and production. Desire relates to the reason a person chooses an object or activity. Production deals with the process that involves a type of exchange, i.e the exchanging of ideas, money, energy, etc. (Hans, 1981).

Only when we begin to understand how play affects our lives at both levels will we be able to understand the place of our own activities and their function in our world. Play draws our attention to what is most significant in our lives. Playification is the application of this understanding.

PLAYIFICATION

Playification is using engaging play based interaction in situation and non-play contexts to make a product, service, activity, or application more engaging, enjoyable, and motivational. Playification is a method used to imbue an activity, task, or artifact with a psychological, emotional, social, or physical reward and then evaluate the levels of extrinsic and intrinsic motivational forces. A playcentric approach requires continually keeping the participants experience in mind, and continual evaluation and testing of the interaction of the user and artifact through every phase of design and development (Fullerton, c2008). Playification principles are based upon participatory ethnography, the big 5 personality traits, PLEX, and other qualitative methods.

PLAYIFICATION PRINCIPLES OF MEANINGFUL PLAY AND SOCIAL ENGAGEMENT

The playification principles of meaningful play and social engagement work together to bring about behavior change. Playcentric research methods afford the ability to identify the relationships between playful experiences, personality traits, and human values. This understanding enhances a model of playful engagements that, on the design side, can be used for design inspiration and validate design decisions. On the user side, this information provides the statistics and feedback required to make informed decisions.

MEANINGFUL PLAY

Meaningful play is play with an objective for the user to learn and explore content or ideas in a fun or enjoyable way. Meaningful play is intended to be activity or action driven with emphasis on the experience rather than the artifact or game. It is flexible enough to evolve in order to meet the needs of the user. An example of this in the health related tracking devices is when challenges or objectives are matched to the user’s requirements or needs with the purpose of helping them accomplish an overall goal of improving their health and well being in an enjoyable way. Meaningful play takes place in the overlapping area where playification and play related artifacts come together to form a system (figure1).

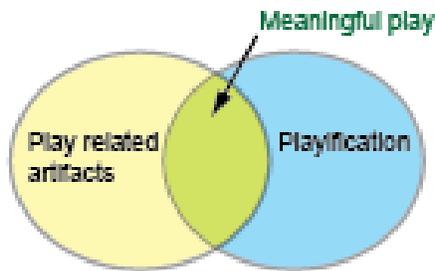


Figure 1. Meaningful play activity location.

Meaningful play allows the participant to understand and learn from the relationship between events. It enables optimal experiences and the ability to achieve purpose. In order for meaning to be created, clear rules for action and a way to concentrate and become involved must be established. “The objective is not what is important, what matters is that it focuses a person’s attention and involves it in an achievable, enjoyable activity” (Csikszentmihalyi, 2008).

SOCIAL ENGAGEMENT

Social engagement is the utilization of communities and support networks of users with similar interests. These users connect via the product site or application. These communities are intended to support, encourage, and enhance play and ensure pleasurable experiences. Social engagement as related to health tracking devices allows for competition, pitting users against other users, in order to achieve beneficial outcomes. Social groups allow for intrinsic and extrinsic rewards while helping to keep people motivated and coming back to participate on the sites. This keeps a continuous interest in the device and activities. Successes and failures are shared through these social connections providing support and giving the user the ability to be part of a greater whole.

When meaningful play is combined with social engagement a change of behavior is more likely because goals and objectives are reinforced and encouragement is provided to help accomplish tasks that will improve health and well being. Combining meaningful play and social engagement provides a platform for the user and their objectives to evolve with the system while participating in a supportive and sometimes competitive community adding additional motivational factors.

In order to develop meaning and create meaningful play the activity must connect to the user. It must have value and build a passion that will lead to the accomplishment of objectives. Deterding warns that achievement cannot be the only reason for using the product or service (Deterding et al., 2011). Meaning can be greatly enhanced when users are allowed to bring personal or social goals to the process and when goals are allowed to be customizable. Further, meaningful communities are desired to support the play. These provide social interaction and allow others to care about the specific activities.

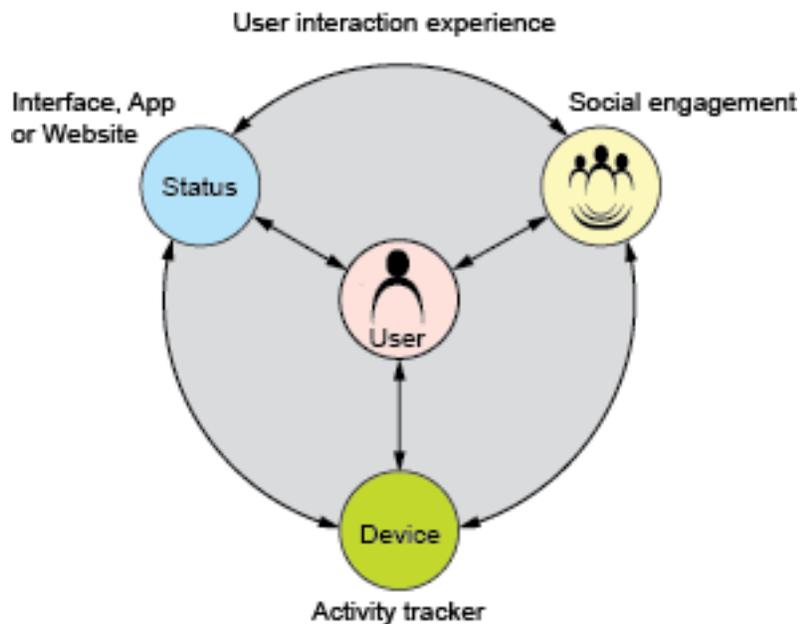


Figure 2. User centric interaction experience.

An example of meaningful play and social engagement bringing about behavior change could be described as follows (Figure 2). A user, needing to improve upon their physical fitness, connects with a health related device and establishes a supportive network of like minded users on a site connected to the device. The user then competes by participating in activity challenges in which activity is monitored through the device and then uploaded to a site. The user does this to obtain status badges that can be transferred among community members. This creates a value in the badge and offers extrinsic reward to the user that currently holds the badge. If the user is beat and the badge is transferred to a different user, the original user is likely to be motivated to re-obtain that status or seek higher status. Social engagement sites may also have boards where users can post and comment on activities, successes, struggles, and questions in order to provide encouragement and support to one another. In addition to these possibilities, the site may also track personal improvements of the user and provide incentives through scaffolded goal where the user is encouraged as they reach a certain level based on activity accomplishments. Users should have the option of how to participate. Allowing a variety of options creates a space where the user has control and can participate at a level they are comfortable with.

Meaningful play is incorporated in the activities the user chooses to participate in. Social engagement is apparent in the community atmosphere. The combination of meaningful play and social engagement significantly increase the likelihood of user success in accomplishing health related goals. The feedback provided to the user via status, social engagement, and device metrics will allow the user to make educated decisions that can result in behavior modification.

DESIGNING FOR MEANINGFUL PLAY

Meaningful play begins by using the imagination to create narratives and stories that can frame the space around the user. This includes rules, challenges, games, and gamification. In order for play to be truly meaningful one must create a free space in which one can play. This space must allow the freedom to explore in positive environment where one can feel safe to try new things and fail. It must be an environment in which ideas and objects can be shared.

There is no one size fits all process for integrating meaningful play, but there are a few useful tip that span all design applications and are especially relevant here. When designing for play it is important to think about the process of activities and not solely about the features. It's crucial to focus on the intended audience. Know the users; create personas for them that can be used to evaluate throughout the design process. Identify and design for the user's method of play and motivations. Collaborate with the user if possible. It is suggested that designers use PLEX cards to assist in the generation of new directions and activities. These cards are designed to create scenarios that result in playful experiences (Lucero & Arrasvuori, 2010). Combine these preparatory playcentric methods with competitive product analysis, literary reviews, observation, interviews, and direct participatory research to gain a holistic understanding of the user, activities, and systems.

Continuously monitor and evaluate throughout the design process. Build and test prototypes, playtest often, continue to create different iterations that explore rule variations. Gather and access valid feedback to determine if the play is achieving the intended goals. Discuss possible improvements, and document and learn from both successes and failures.

Once the initial designs are completed gather as much feedback as possible. This includes qualitative and quantitative sources. Use this information to make adjustments until it can be determined that an activity meets the needs of the user in a way that is highly engaging and enjoyable.

PLAYCENTRIC THEORIES USED TO CREATE SOLUTIONS TO HEALTH ISSUES

Health monitoring devices were selected to illustrate how playcentric theories are being used to create solutions to health issues. These devices allow the creation of systems (products and graphic interfaces), free spaces for activities, and the guiding rules required for play to exist. In these examples playification of health is employed as an approach for bringing about behavior change. These products provide a playful approach to overcoming childhood obesity by promoting physical activity, healthy lifestyles choices, and increased self-esteem and body image.

PRODUCT EXAMPLES

Many have recognized the negative current health trends as major societal issues and are working to develop innovative solutions. The focus of these solutions is in the form of wearable devices that track movement and activities, and interact with interfaces or websites to inform the user of their progress toward goals, keep statistics, and provide social networks for support. In 2010 the largest challenges of these solutions were to the seamless integration of a device into daily wear and usage, unobtrusively

sense and present health information in intuitive ways, and maintain function without breaking (Ananthanarayan & Siek, 2010). In two years technology has come a long way. Products are much more integrated and have reached a point where they are no longer obtrusive. It is now possible to seamlessly integrate objects and systems into daily activities, but there is still room for improvement in the experience of the activities.



Figure 3. Zamzee by hopelab, (Song, 2012).

Zamzee by hopelab (Figure 3) is an inexpensive 3 axis accelerometer that records changes in movement. This product is supported by social enterprise. Its target demographic is tweens age 11-14 yrs old because they are most at risk, and have shown a tripling of obesity since 1980. (Ananthanarayan & Siek, 2010) Although Zamzee is intended for tweens it features a simple design that makes it enjoyable for both younger and older users. It is a good example of an interactive playful system.

Nicole Guthrie, Hopelab Manager of Data Analysis shared that the social engagement is provided not by random community members but by family and friends. She explained there was almost zero user drop-off when the tween was supported by their family and the system was integrated into school. With no support the tween lost interest in less than six weeks. She clarified that their data showed this type of reward and encouragement system boosted a 30% increase in daily activity. That amounts to nearly an extra marathon of activity a month. The rewards varied from virtual badges, gift cards, and prizes that could be selected from their website. Nicole stated, "Fun, joy, and play can change human behavior for the better. Zamzee is proof of this." Her goal has been to light a lifetime of physical activity in every kid ("HopeLab: Innovative Solutions: Zamzee," n.d.), (Guthrie, 2012).

Announced at TED Global in 2011, the Jawbone UP is jam-packed with sensors that allow the user to track eating, sleeping and activity patterns. Based on what it senses from your daily activities, it will give the user suggestions in order to balance aspects of well-being. For example, if the user didn't have a good night's sleep, Jawbone Up will urge the user to eat a high-protein breakfast and drink an extra glass of water before starting the day. It incorporates multiple ways for the user to interact with a system rich with expanded content. In addition, to the website it has an app for connecting and uploading images via an iphone or ipad. The UP band is intended to be worn 24/7 on the users wrist for up to 10 days per charge. Max Utter, VP of wellness product management at Jawbone stated "UP is the band you want to

wear and an app you will love to use. UP is all about the fashion and wearability.” He expressed that the company worked to keep the device simple and easy to use. The Motion X software allows challenges to be customized to help each user reach their goals. There are also different motivational models that will apply; these are based upon user desires, their daily feeds, team based challenges, and a community to ensure social engagement. As a note, UP was recalled in December 2011 due to manufacturing quality control issues. However, Jawbone is planning a re-launch of UP in the near future. (Utter, 2012)

OPPORTUNITIES FOR NEW DESIGN

New opportunities are afforded by playification because it allows the freedom of activity required for rules of play to adapt to meet the needs of the users. Application of PLEX early in the design process also helps to identify new concepts and areas that may have been overlooked by other innovation methods. PLEX is a playful experience model that evaluates the relationship between experiences and real world values and personalities. It identifies emotions and behaviors and is a useful tool for playful concept creation (Walsh, Boberg, Arrasvuori, Korhonen, & Walsh, 2010).

In conclusion effective implementation of playification principles requires the creation of desire within the user that motivates them to achieve and obtain objectives and goals. This activity must be reinforced by an established, easy to understand, method for providing status and information to the user. This information should be generated as part of the site or app, and should illustrate bio metrics that have assigned value for the activities. These may include competition comparisons, social interactions, user rankings, and other types of lists. The underlying purpose for the user’s status feedback via badges, icons, or accomplishment, is so they can easily track their changes in activities and improvement in health. Some achievements could have tangible rewards such as gift cards for a given number of days of activity. Be cautious because leaderboards and competition can also have negative ramifications. The rewards or incentives need to promote personal growth and learning through compiled data and evaluation and should not be based solely on other’s opinions and extrinsic reward. Combining meaningful play and social engagement increases the likelihood for success in implementation of healthy lifestyle change for the user.

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