

Designing Games for Everyone: The Expanded Game Experience Model

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ABSTRACT

In this paper, we introduce and discuss a theoretical framework that can be used for designing and understanding game experiences in their situated contexts. The framework illustrates the fact that the design process for casual games, which values acceptability, accessibility, simplicity, and flexibility in game design, has become relevant for more than just casual games. The framework specifically addresses such changes within digital games culture, changes that have been embodied in phenomena such as casual and social games.

Categories and Subject Descriptors

K.8.0 [Personal Computing]: General – Games.

General Terms

Design, Human Factors, Theory.

Keywords

Game design, casual games, social games, games as services, game experience, model, player services, affordance, threshold of use

1. Introduction

Digital distribution and subscription-based sales have not only altered the economic models in use in the digital game industry, they have also revolutionized how and when game design and development is carried out. Quite frequently, games are updated and patched, or they can be expanded through additional downloadable content, which raises the question of whether a game is ever truly finished from a development perspective. In particular, with subscription-based online worlds and social games in “perpetual beta” mode, the time needed for game design has increased. However, the models used to map the design process lag behind. It is time to look at games as experiences that have expanded beyond these models.

Many current game experience models focus on modeling the enjoyment of the gameplay or other factors in the gameplay session [6,18]. They are gameplay-centric models; if the world outside the game system is considered at all, it is usually

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considered only in the context of the social situation immediately surrounding the play [20, 4, 5]. On the other hand, there are some design models of games in context that account for cultural context, as with Salen and Zimmerman [19] in *Rules of Play*. But whether the design model focuses on the formal structure of games, the experience of playing them, or their cultural value, the continuum of gameplay experience as it connects with other experiences is neglected.

The practical game design model presented in this paper, the Expanded Game Experience (EGE) model¹, is especially relevant for the design of casual and social game experiences, although the model is useful for any kind of game or playful (service) design, digital and non-digital alike.

2. Transformations of Digital Play

One of the driving rationales behind the EGE model is the rise of the casual games phenomenon. The casual games segment is one of the fastest growing segments of the gaming market; its market share is estimated to increase annually by 20% [2]. Games are developed for the mass market with varying business models and an increasingly wide perspective on the experience itself. Different kinds of players are served with different products and possibilities for diverse activities around the games. Game environments are blending with other environments and social activity, becoming normal parts of everyday lives [17]. It has become increasingly easy to pop in and out of games, an activity that casual games support. At the same time, games are delivered directly to your home computer or even played in a browser window without the need to install anything. Games can serve as small bites among other social activities, and these social activities increasingly take place in virtual environments. As other digital phenomena are becoming more accessible, so games are increasingly directed for large populations. Jesper Juul [8] has discussed this as a *casual revolution*.

This rise of the casual games phenomenon reveals design values that we may have taken granted, particularly in terms of lowering the threshold of use that games require [11]. Catering to wider and more heterogeneous user groups requires attention to different affordances and user needs in terms of play environments. As game designers deal with larger and more diverse gaming audiences, the players themselves may have radically different motives, skill levels and game literacies, access to game

¹ An earlier version of this model was introduced in the article *Casual Games Discussion* [10] where the issues that arise in the discussions over “casual” within games cultures were examined.

equipment and resources, and even world views and beliefs. What we as designers provide and enable for the players should be rethought, just as the requirements of play should be re-evaluated as players become more discerning with their game play needs. They make choices about whether they want to play at all, how much they want to invest into games, how they are willing to use their time, and what is prioritized in their lives. There might be obstacles that they are not willing or able to overcome, which may include buying new equipment, using their time to learning, waiting for the product to be shipped, or even adjusting their living environment. Therefore, lowering the thresholds of use may be critical in keeping the consumer interested. But this is not enough: Some of the obstacles may be due to the lack of affordances. The play environment may not afford anything interesting, meaningful, or useful for players, or what is provided does not match the norms, needs, and situations of the players, making the environment appear irrelevant to them. In this case the values of the design should clearly be rethought [11]. Additionally, it is not enough to look at the adoption threshold of an experiential product. Instead, we should examine the various thresholds of use within the cycle of the expanded gaming experience.

For example, mobile games have long been touted as part of the realm of casual games [10, 23], yet installation and accessibility issues had driven away many casual customers before Apple introduced the iPhone. If people do not have the time or the skills to install and figure out a mobile game or game service, they will never know that the difficulty levels of the games are lowered or that the play sessions are shortened. In other words, game designers must rethink the entire process of obtaining, playing, and maintaining a game, and not just the experience of the game play itself.

The changes in the game industry during the last decade have shown the significance of the context of play. The rise of virtual worlds, mimetic user interfaces [8], casual games, and social games have normalized digital play [11]. At the same time, mobile games have failed to find a large audience (until the iPhone) and pervasive games have struggled to expand in scope beyond their niche audience. Play is ubiquitous in society to the extent that hard core gaming is now the periphery rather than the representative center of gaming culture. Yet we lack the tools and models that would help us understand why certain game types have succeeded where others have failed.

It is not enough to just put games “out there” with easy gameplay, instrumental play functions, mundane themes, and general appeal. Any game design model should include phases describing how to account for the processes and experiences associated with game adoption, preparation, use, and management. The secondary nature of games as part of a larger experiential context of “using” a game makes the act of playing itself even more vulnerable to changing situations [8]. For example, it may not be relevant to tailor games to suit a specific target group, but to suit changing situations and make it possible to blend games with different contextual factors in various ways. To design casual game experiences is to design experiences in a larger experiential context, and because the experiences that players seek are not necessarily based on immersion [6] or flow [3, 22], we need new ways of understanding these experiences.

The normalization process of gaming culture means that the design process for casual games, which values acceptability, accessibility, simplicity, and flexibility [11], becomes relevant for most games. Accessibility in particular will redirect attention from typical gameplay-centric design approaches to the expanded surroundings of the total experience within which every game is situated. It is necessary to consider the acquisition of the game product, the price factors, and the concomitant services to smooth the overall experience with a game and make the act of obtaining a game easier to accomplish. Finally, the possibility of shipping an unfinished product and tinkering with it on a live player base while measuring the effects of each tiny incremental change have changed the way the play experience is conceived. In sum, digital games and game experiences are in constant flux from both the consumer and producer perspectives.

3. Expanded Game Experience (EGE) Model

As stated earlier, games are experiential products. What makes the design of them challenging is the inherent flexibility in the relationship between design and play behavior. Putting certain elements into the game system does not always cause the same effects. Game design is always *second order design*:

As a game designer, you can never directly design play. You can only design the rules that give rise to it. Game designers create experiences, but only indirectly. [19]

Design can support different play activities, but it is much more difficult to trigger exact reactions or restrict certain play patterns. In its nature, design has no logical outcome; therefore, no sequence of operations will guarantee a result [12]. The solutions in design involve value judgments and the nature of the process is prescriptive instead of descriptive. In this sense, to design is to have an approach that is based on certain value assumptions and principles [12].

The change in design values implicitly suggests that the transformation in design approaches concerns not only the gameplay design, but the larger context of the game-related experiences, namely the *expanded game experience*. Gameplay is always situated in a wider context but grasping this culturally-located experience is important especially when designing games that are more casual, that are “closer” to the everyday – or when gameplay is a secondary activity. In order to provide suitable services and support for different game experiences a more holistic framework for design should be adopted. It is not enough to simply adapt new approaches to gameplay design only; we must look at the level of the overall experience, covering the different aspects from information retrieval all the way to product disposal. Game service design becomes just as important, if not even more important, as the traditional game design, especially for casual players.²

Considering both the enjoyment of the play activity and the flow of the consumer cycle are vital in understanding the experiential factors of games cultures as well as designing versatile, fluent, and powerful experiences. If we think about the perspective of the player, there need not be any separation of the different parts of the experience. Indeed, Ian Bogost [1] has discussed games as

² Numerous game experience models do exist (e.g. [7]), but we feel that they do not emphasize enough the dynamic and situated nature of gameplay.

being “a mess” since it is possible to see them as lines of code, as a package, as the experience they create, and so forth. When people buy a new console, read a game magazines or game reviews online, or even just talk about games with friends, their interpretation of the gameplay situation changes. The separation of consumer cycle and gameplay experience design models may lead to a new understanding where the service and the products do not necessarily resonate on the level of the overall experience of the consumer.

3.1 Cycle of Activities and Transitions

In the EGE model (see Figure 1), six unique activity phases are identified along with their corresponding transition steps. The model is conceived as cyclical: The user always enters at the same point and can move from one state to the next until reaching the fifth state. After that, the user starts the cycle anew from the beginning. However, she can drop out at any time and move to the sixth state (“the user” will be referenced as “she” throughout the rest of this paper).

in various ways: Game advertisements on television or other media, discussions with friends, news, game examples and peer experiences, and almost anything game-related can get the user interested in playing. This state ends when the user crosses the threshold of *choosing to play*.

In the second phase the user has decided to play, but she does not yet know which game she will play. This phase is called *enabling*. As the interest in playing builds up, the user shifts to browsing different possible games. In this phase she is exposed to game reviews, suggestions from friends, advertisements, game demos, and so on. When something interesting enough has been encountered, she may be willing to enable the game experience by buying the new hardware, setting up the lighting, ordering the game, or going to a game shop. This state ends when the user crosses the threshold of *choosing a game*.

The third phase is the *preparation* of the gameplay. During this state all the activities that are needed to make gameplay possible are carried out. This may include the user installing the game, reading the instructions or playing the tutorial, creating an avatar,



Figure 1. Expanded game experience cycle.

In this model the first state of the game experience is defined as *information retrieval*. This is the state where the user has not yet chosen games as her future activity. Users are exposed to games

patching a game, setting up the board and pieces, or, in multiplayer games, waiting for other players to join the game. This state concludes when all relevant preparations have been carried out and the user crosses the threshold of *choosing to start*.

Note that this is also a choice: the user may choose to start once the game has been installed or she may choose to install all possible service packs and fixes, import numerous skins and other optional add-ons, or even create a mod herself, all before choosing to start the game.

The fourth state is the one in which the traditional game design models concentrate, the state of *gameplay*. Once *gameplay* starts, the activities evolve according to the game that the user is playing. Gameplay ends when the user *chooses to quit*.

After the play session, the user may extend the experience by entering the *afterplay* phase. In this state, the user reflects on the experience, either alone or as a part of a group. This may include discussing the experience with other players or peers, finding more information about the game, telling friends how great or abysmal a game is, and so forth. Afterplay can end in two ways: Either the user can *choose to replay* or she may – either through choice or random happenstance – abandon the game.

The decision to replay launches a new cycle. The game experience continues to evolve after the first play session, partly because it is possible that the game itself continues to evolve. It is important to keep this temporality and adaptability of the design in mind.

If abandonment is chosen consciously, the user exits the cycle and enters the sixth and final phase, *disposal*. In this state the user can, for example, remove the installed game, sell the cartridge or disc, or pass the board game to a younger sibling. Though it is possible for the user to revisit the game experience later, for the time being the active engagement with this game experience has ended.

The activities may be interrupted at any given time and the experience can also dry up even before the gameplay has begun. While it is possible to lose the user at any given time due to various accumulating thresholds, the most critical thresholds are built in the transitions.

Obviously, the activity sets, decision points, and transitions of activities may, in real life, have very blurry borderlines. In addition, experiences vary according to the games played, services used, and the contexts of the user. While she can bounce back and forth between the activities and regulate the intensity, the picture is far more complicated than our model, or any other simplified framework, can depict. Some game experiences involve fewer preparations and enabling activities and some are played for a long time with no clear transitions in and out of the game. A single player can also be engaged in numerous experience cycles at the same time: she might anticipate upcoming games, have numerous games installed on her hard drive or sitting on a shelf, and actively reflect on the differences between games. Cycles can last years (from announcement of a game to final disposal of a loved game) or seconds (from learning about a game to realizing that the proper hardware is not at hand).

3.2 User States, Affordances and Thresholds

Very few users actually fit the user profiles³ drawn from the player data they generate. User motivations and driving forces, resources, contexts, beliefs, and interpretations are all in a constant state of flux. Users seek different things from the many games they play: Some games may get us excited while others

³ For instance casual-core-hardcore classification.

feel relaxing, or some games may mesh with our social interactions while we reject other as morally wrong. As human beings, there are days when we are happy or sad, excited or tired, and the game experiences we seek change accordingly.

In this sense, the context of the player and the player state is in constant flux. The design of the total gaming experience should acknowledge the different states of the user; therefore, game-related services should be developed according to these changes by balancing what is required from, and provided for, each user. From the perspective of the user, there are requirements and restrictions that define the activity and possible outcomes of the game experience. All of them are relevant in different parts of the experience. The activities of the user can be supported or restricted through the design. The design may afford certain functions as well as require actions and investments from users so they may proceed with their experiences.

Figure 2 (below) shows the relevant user factors and design elements of the EGE model. Each activity phase of the model has corresponding *user factors* that form the user state. The *situation* (and context) as well as the *worldview* (and beliefs) of the user create a background that affects the interpretation of the interaction with the service or the game. It should be acknowledged that these background factors are constantly susceptible to change.

The user also has *motives* (or driving forces) that affect the decisions that are needed in order to enable the activities. These motives are usually something the user cannot or will not alter, and they are certainly beyond the reach of the designer. Yet it is possible to tailor games for certain situations or certain worldviews. *Bejeweled Blitz*, the one-minute game on Facebook, and the immersive console game series *Silent Hill* fit completely different situations, just as *September 12th* and *America's Army* communicate very different political views.

The user also has *resources* which she, at least up to a degree, can regulate (such as attention level, money and time), as well as resources that are beyond her immediate control (skill and knowledge levels). For example, gaming literacy is a skill – how familiar a user is with the fundamentals of first-person shooters.

The design of the game or a service should try to acknowledge, have an influence on, and respond to the user state by *threshold design* and by providing *affordances* in order to maintain an enjoyable whole within the game experience. What is required from the user and what is provided to the user should be in balance with what the user can provide and what kind of experiences she is seeking from the environment.

Affordances of the design are the properties in which the characteristics of the environment influence its function [14]. An affordance is a relationship between an agent and an object, and refers to

[--] the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used [--] A chair affords ("is for") support and, therefore, affords sitting. [15]

Recently Norman [16] revised his stance on affordances; he now believes that they are a form of communication between a designer and a user. Thus, the affordances of an item should be perceptible to the user. In the context of the EGE model, affordances are perceived as *receivables* and *possibilities* of the

game or the service. They are conceived not only as what a user can do with a game, but also as what those possibilities mean for the user. Receivables can be, for instance, the immersive state that one can reach with story-driven games like *Bioshock*, advanced language skills for Finnish kids playing English games, or social fulfillment of playing *Trivial Pursuit* with friends. Possibilities are different modes or activities that the user will be able to choose within the experience, for instance choosing between single-player or multi-player games, playing a game on a console or PC, or working on one puzzle while being stuck on another.⁴

Thresholds of use are the properties of the environment that prohibit the user from carrying on her experience without a certain input, or that limit the user's actions. Thresholds consist mainly of *requirements* and *restrictions*. Requirements are, for instance, the time or money that should be invested into the game or the skills that are needed in order to initialize it. Restrictions limit the possibilities by demanding the user, for instance, play only at certain times of the day. Also, a lack of affordances can constitute a threshold. In this sense, if the activity is too demanding, limited, or does not provide meaningful outcomes to the user, the resulting experience may be aborted or perceived a

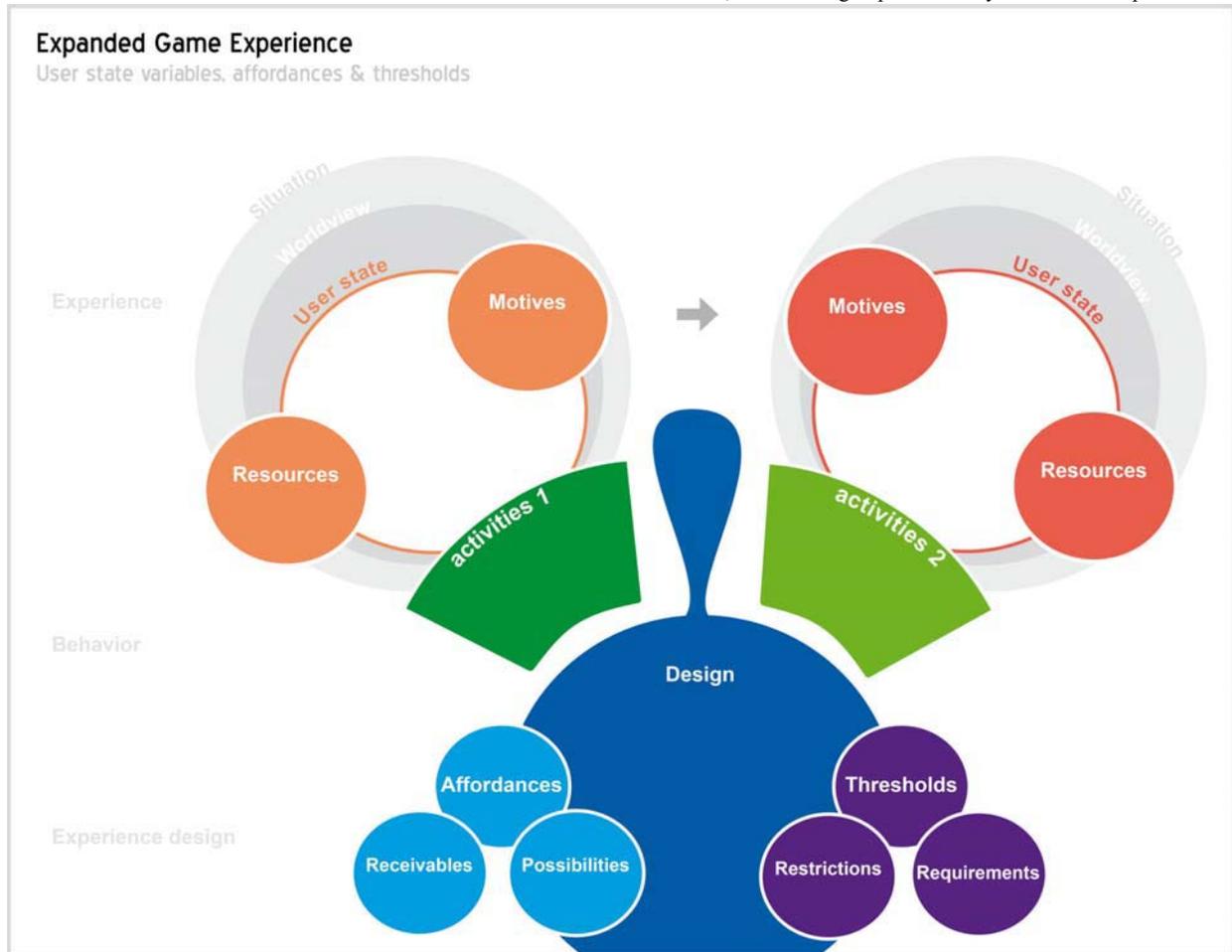


Figure 2: User state factors and affordances & thresholds of design.

⁴ For most existing gameplay experience models, this would be the core of the model; maximizing the fun, flow or immersion of playing (e.g. [7, 6, 13, 22]), ensuring that the playing is meaningful [19], or analyzing the possible playful experiences [9]. The EGE model forefronts the situated nature of receivables and possibilities equalizing gameplay as part of the whole experience.

negative. It is notable that “meaningful” is highly user-specific. What is suitable, meaningful or relevant for some users may be pointless or unnecessary for others.

The thresholds are also markers that the user needs to overcome. There are restrictions and requirements the user must be able to cope with as she navigates through an experience. Thresholds are about delayed pleasure, as they contain a promise of what is to come. Overcoming an obstacle imbues an experience with meaning (“this is not for everyone,” or “this must be complex as it is so difficult to set up”), and creates a sense of exclusivity (“grandpa wouldn’t be able to install this”).

When designing game experiences for wider audiences, the focus is on lowering the thresholds as much as possible and concentrating on general appeal affordances that make games easy to access, fast to adopt, and safe to play. In this way, the people with less time, attention, skills, or resources can be drawn into the game experiences and kept there. On the other hand, some of the intense experiences may be designed to involve elevated thresholds, such as rare collectibles or a wide variety of possibilities (as in sandbox games, for example), as well as affordances that widen the possibility space of a single game product.

3.3 Player Services

In order to ease the transitions and pair the game with its users seamlessly, we can form a layer of game-related services. These *player services* can take many forms, but most of them lower the requirements or soften the restrictions of the experiential product. They are increasingly automated and integrated into the game experience in a way that renders them invisible to the user. Others are premium services that users are willing to be financially committed to, such as *Xbox Live* or printed game guides, while others are provided for free by fellow users (game wikis, for example).

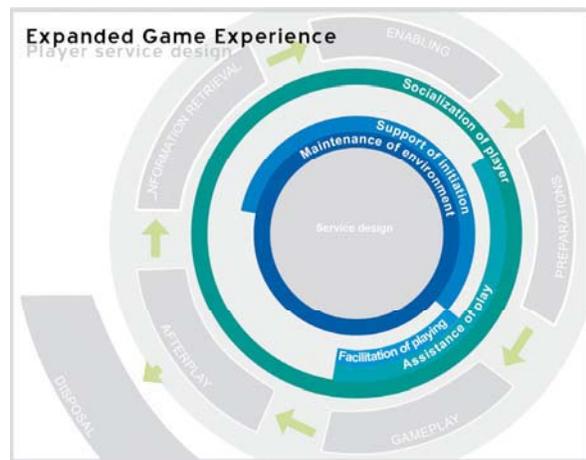


Figure 3: Player services and the expanded game experience.

Stenros and Sotamaa [21] have divided the player services into five categories: *maintenance of the environment* (for example, administrative duties on online worlds, keeping the pinball machines operational in an arcade), *support of initiation* (helping users find and access the right game through recommendation systems, helpful sales clerks, or digital delivery), *facilitating of playing* (running the game using gamemasters, croupiers, referees, or raid organizers), *assistance of play* (helping users play the way they want with mods, hacks, patches, walkthroughs, selecting difficulty levels, and so on) and *socialization of player* (training and teaching how to play, tutorials). These player services are relevant at different stages of the expanded game experience (see Figure 3).

The combination of a game and a service can be used to create an exclusive yet approachable. A console game such as *Grand Theft Auto IV* has high restrictions (e.g. user age restriction) and requirements (dedicated game console, fairly high price, gaming literacy, gaming controller usage skill), but these restrictions and

requirements can be lowered by providing a strategy guide, borrowing the game from a friend, or – more theoretically – playing the game in an arcade or with severely simplified controls.

The success of casual and social games shows that there is a large audience for games that require little effort to set up. The casual revolution is all about facilitation of playing and assistance of play. Furthermore, by developing games in close connection with different levels of player services, game designers can tackle the difficulty (or impossibility) of serving different users and their ever-changing situations with one static, gameplay-centric experiential product.

3.4 Heuristic Model for Expanded Game Experiences

Even though the EGE model is represented as a circle, it does not mean the experience itself is a clear-cut set of discrete activities and corresponding interpretations. The EGE model is also a heuristic⁵ tool. The level of simplicity of this model should be retained in order to manage the design process, especially in a model such as EGE that seeks to encompass the entire experience of gameplay. However, if we want to look at the more organic nature of the experience, we should acknowledge that the form and the shape of the different factors of the experience are not rigid. In an alternate visual interpretation of the EGE model (figure 4), the transitions of the activities are represented with blurred lines and they create a continuum that is more accurate. There is also no perfect circle with the EGE model, but more of a dynamic swirl that interprets the truly expanded game experience. This representation also enables comparisons among different kinds of experiences in a rich way.

The problem with gameplay-centric approaches to game design is that they assume that, for each game experience needs to have played the game and experienced the immersion, flow, or other essential parts of the interaction with the game system. Yet people who have not played a game might still have strong (and even vocal) opinions about it. The gameplay-centric view of game design is too narrow and creates little space for understanding other kinds of gaming experiences, such as those associated with pervasive games, spectatorship, and perhaps casual games.

⁵ 'Heuristic' is used here in its philosophical sense: "to enable understanding." It should not be confused with term 'heuristics' from HCI literature.



Figure 4: More organic approach on modelling EGE.

We will continue to possess an impoverished perspective of gaming until we consider the culture of games as what happens around, before, with, or as a consequence of gameplay. If a person waits a year to buy a game, her experience with the game was already forming during that waiting period. It is crucial to consider such seemingly peripheral aspects of the gameplay experience during the design process.



Figure 5: Using heuristic EGE model for depicting different game experiences.

One way to consider such aspects of the expanded game experience would be to look at different experiences and compare them according to the time spent and invested in the experience. We would then have different kinds of experience scenarios, as presented in Figure 5:

- a) Very short preparation and enabling time, and no gameplay reflection; for example, playing a game of *Solitaire* on the office computer or a few rounds of *Bejeweled Blitz* on Facebook;
- b) Enabling of the game session requires considerable work; for example, updating your hardware, installing software that requires a lot of patching or emulators, or buying a new computer;

c) Interrupted gameplay, with no replay, perhaps due to disappointment, upsetting content, or some external reason that drags the user from playing the game;

d) Experience with a game that includes no actual gameplay; for example, carefully choosing a game for a child, setting up the game, observing the child's play with the game, but never personally playing the game.

The parameters for the differences in experience intensity include more than just time. In this sense the EGE model enables the interpretation and comparison of different kinds of game experiences as equal with gameplay-centric experiences.

4. Conclusions

The EGE model frames the game design process in terms of different actors working on different aspects of the entire game experience. The model also helps game designers understand the wide variety of game-related experiences that a gamer can have, as well as how those experiences can evolve over time. This model also aids designers as they strive to identify weak spots and conflicting choices in their games, and rationalize overall design decisions. Additionally, the EGE model can serve as the basis for the development of future services that provide increasingly enjoyable and fluent game experiences.

Furthermore, as we live in a culture in which an increasing number of people play games, the EGE model can help designers understand how to develop game experiences for those users who fall outside the hard core group of gamers. The uses of game products, as well as users' expectations and attitudes towards such products, inevitably vary in intensity.

As the digital world becomes part of everyday lives for larger population, the variety of functions that games are fulfilling and the thresholds of use for digital games also become more versatile. The rise of casual and social game industries indicates transformation in games cultures that embodies this very same development. The direction of the change is not surprising, perhaps even trivial, since such variety of the use of games in physical world and the tradition of games already exists outside the digital realm. However, the change in current game design values and approaches needs to be taken place if one wishes to support such transformation. In three decades, we have already managed to build some pivotal premises for digital game design, even within its versatility. The notions of challenge, immersion, flow and meaningful actions are all well-established, but they may not be enough to grasp the future of games. Why do games need to be highly challenging? Why does one need to devote whole attention to a game and immerse into its world? Why should one need to feel the flow of the game experience? What constitutes a good game for someone who doesn't really care about games passionately?

Game researchers often examine games through their own play experiences and through the eyes of enthusiastic gamers and game fans. Some of the ideas we as researchers develop as a result of this myopic perspective may, therefore, stem from the beliefs we have acquired through our own experiences with games. Clearly, we need to develop a wider understanding of the different game cultures that exist around the world, a process that also requires understanding the context of the experiences and the complex dynamics between game design and user throughout the total experience. Games can bring about entirely different experiences

for different people; as a result, consumers may choose different games for completely different reasons. Even though the variety of design possibilities for any given game is endless, the direction of the design should embody coherent design values. The EGE model is designed to help promote such values through an expanded and more open perspective on game design.

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