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Playful or Gameful?
Creating Delightful User Experiences

Insights

→ Research on playfulness and gamification has looked at video games to create better user experiences.

→ The Playful Experiences (PLEX) framework advances our inquiry of UX through providing a fine-grained understanding of pleasurable user experiences.

For many of us non-digital-natives over 30, our first contact with interactive technology came about through playing video games. Long before personal computers and mobile phones became part of our daily lives, we were already hooked on these games. In places as diverse as Chile, Greece, and Finland, at the arcade or at home (for example, with the Atari 2600), there was something powerful about these games that had us captivated from the very first moment we played Donkey Kong, Centipede, or Pole Position. But what made them so interesting and intriguing? What made us go back regularly (even daily) to the arcade?

Over the years, games scholars have been studying some of these issues [1]. But could some of the power behind video games be channeled to motivate people and help them achieve their goals? Could playful designs inspired by what makes games fun and entertaining help create better user experiences?

In our work we have been trying to understand how playfulness can be employed in creating meaningful and memorable experiences for users. Playfulness is an important but often neglected design quality for all kinds of products. Features that make games and play engaging can also make other kinds of products more enjoyable,

elicit more meaningful experiences from them, and ultimately increase the quality of the overall user experience and, respectively, the market value of a product. Playfulness, in other words, can be a positive feature in products that goes beyond pure entertainment.

In common language, the terms *play* and *game* are often used interchangeably, and even together, as in "let's play a game." Roger Caillois [2] was the first to make a distinction between play and games by placing the terms *paidia* and *ludus* at opposite ends of a play continuum. Paidia (or playing) is the primary power of improvisation, expressiveness, spontaneity, and joy that is often present in children's free-form play. Ludus (or gaming), on the other hand, consists of formal play, bound by rules and arbitrary obstacles, that defines winners and losers and commonly manifests itself in board games and video games. Recent research on playfulness and gamification (or gamefulness [3]) has been looking at these complementary roles of play. Simply put, while playfulness relates to paidia-type activities, gamification relates to ludus-type activities [4].

Playfulness is a mindset whereby people approach everyday, even mundane, activities with an attitude similar to that of paidia—as something not serious, with neither a clear goal nor real-world consequences. Playful experiences are realized when people take a playful approach to activities or how they look at the world. Prime examples of playful experiences include carefree jumping between piles of fallen leaves in autumn (Figure 1), mindless swiping between home screens on our smartphone (Figure 2), or mischievous drawing on the hood of a dirty car with a finger (Figure 3). These activities can be highly pleasurable and motivating. The piano stairs at the Odenplan metro station in Stockholm are a good example of using playfulness in an attempt to motivate people to take the stairs instead of the escalator.

Over the past three years, gamification has been looking at the use of game-design elements, including points, levels, achievements, leaderboards, and (intrinsic) rewards, in non-game contexts to motivate and increase user activity and retention. The resulting experiences lean toward the more formal play of ludus, using design elements that focus heavily on rule-bound and goal-oriented play. Examples of gameful applications include Chore Wars, a competition between roommates to get the housework done, JetSet, a simulation that makes going through security lines at airports feel rewarding and productive, and Nike+, which provides an added layer of intrinsic motivation during workouts. Gamification is a systematic complement to playfulness [4].

Although playfulness and gamification are located at different ends of the play continuum, recent research on both topics shares a common origin: video games. Gamification takes atomized design elements from video games and applies them to non-game contexts in

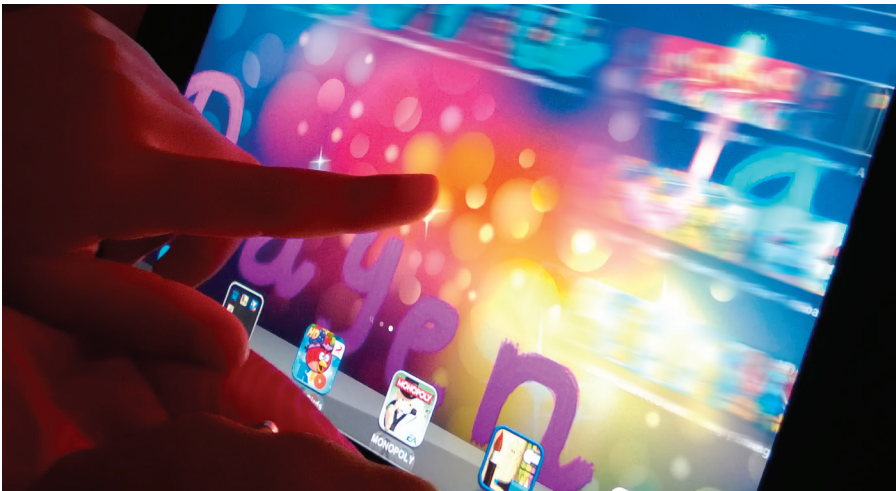**Figure 1. Carefree jumping between piles of fallen leaves in autumn.**

Figure 2. Mindless swiping between home screens on our smartphone or tablet.

Figure 3. Mischievously writing a message on a dirty car's hood with your finger.
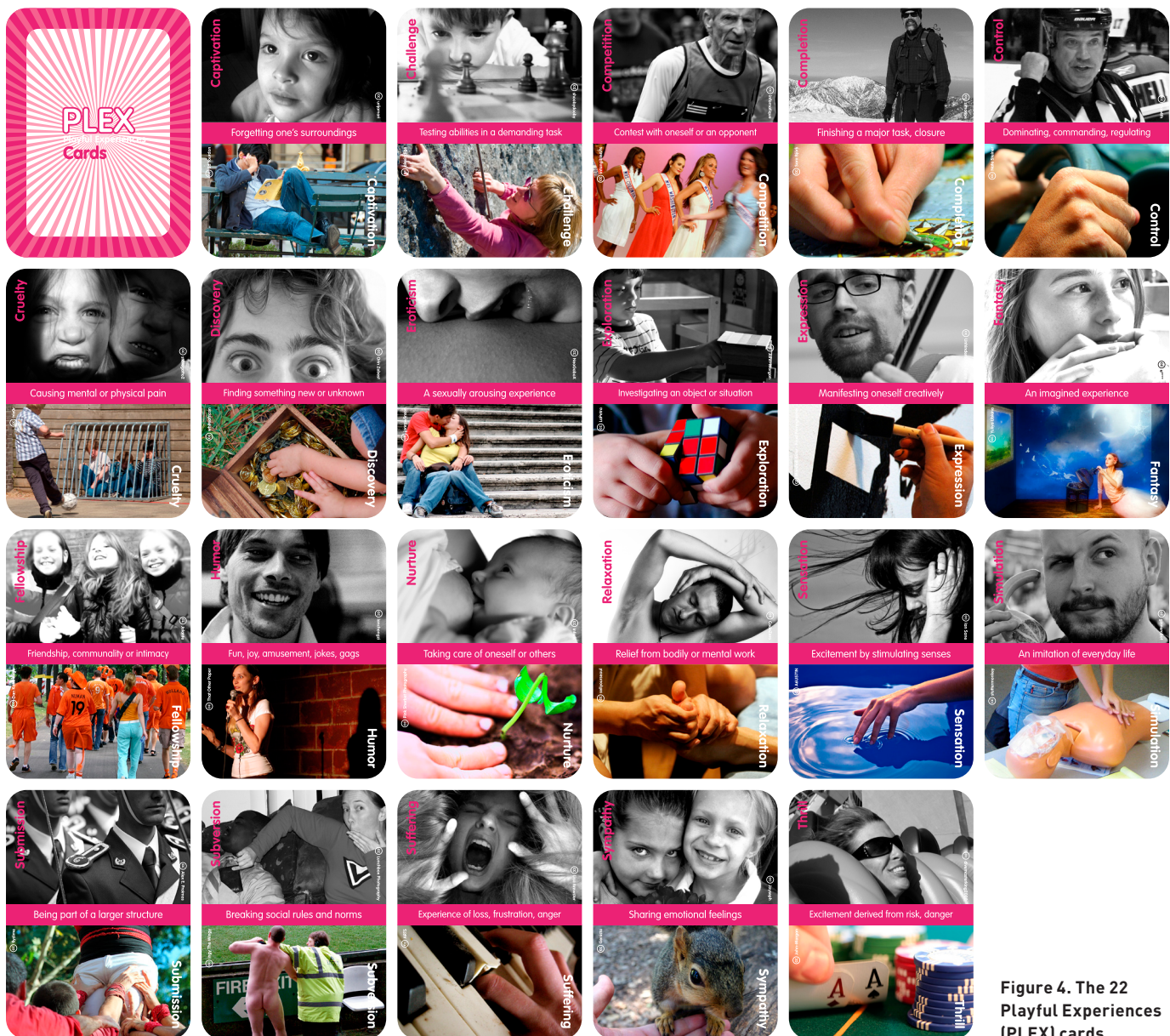
Figure 4. The 22 Playful Experiences (PLEX) cards.

an attempt to make technology and services more inviting. In our work on playful experiences, we have combined theoretical work and user studies on video game play to first identify atomic user experiences that these games elicit and then apply them as building blocks to delight users.

TOWARD PLAYFUL EXPERIENCES

For the past five years, we have been looking into playfulness and its potential role in creating delightful user experiences. The Playful Experiences (PLEX) framework is a categorization of playful experiences based on previous theoretical work on pleasurable experiences, game experiences, emotions, elements of play, and the reasons why people play. As a result of this analysis, we examined the wide range of experiences elicited by interactive products when they are used in a playful manner. To validate the initial PLEX framework, we looked at video games to see which of the categories were elicited, as well as to identify potential gaps in the framework.

Three video games were chosen: Spore, a god game where you have to design a universe starting from a single-cell creature; Grand Theft Auto IV, an open-world action and adventure game that combines driving and shooting; and The Sims 2, an open-ended simulation game where you control the life of virtual characters. These three games were chosen for their high popularity, for being large games that require players to spend a significant amount of time playing them, and for representing three different game genres. Interviews with 13 players were conducted; the results showed that all categories were mentioned on numerous occasions in the interviews and in the context of at least two different games. Thus, the different ways in which players experienced the games could be partially explained through the PLEX categories. Our PLEX framework validation efforts also included a study of everyday gadget use, such as digital cameras, mobile phones, and music players, to see what experiences those devices prompted in users. As a result, 22 categories were included in the PLEX framework (Table 1).

EXPERIENCE	DESCRIPTION
Captivation	Forgetting one's surroundings
Challenge	Testing abilities in a demanding task
Competition	Contest with oneself or an opponent
Completion	Finishing a major task, closure
Control	Dominating, commanding, regulating
Cruelty	Causing mental or physical pain
Discovery	Finding something new or unknown
Eroticism	A sexually arousing experience
Exploration	Investigating an object or situation
Expression	Manifesting oneself creatively
Fantasy	An imagined experience
Fellowship	Friendship, communality, or intimacy
Humor	Fun, joy, amusement, jokes, gags
Nurture	Taking care of oneself or others
Relaxation	Relief from bodily or mental work
Sensation	Excitement by stimulating senses
Simulation	An imitation of everyday life
Submission	Being part of a larger structure
Subversion	Breaking social rules and norms
Suffering	Experience of loss, frustration, anger
Sympathy	Sharing emotional feelings
Thrill	Excitement derived from risk, danger

→ Table 1. The Playful Experiences (PLEX) framework, consisting of 22 categories.

DESIGNING FOR PLAYFUL EXPERIENCES

The PLEX framework was subsequently put to practical use in design-related activities. From a design point of view, we explored whether the PLEX framework could be used to design for playfulness beyond video games.

Several workshops were organized in which individual PLEX categories, or a combination of them, served as a starting point for design. Workshop participants initially had a hard time grasping the meaning behind the PLEX categories from the PowerPoint slides and posters we presented them with. It was in this context that the first design tool, the PLEX Cards [5] (Figure 4), was created. We chose physical cards, a low-tech and approachable medium that fits nicely within the dynamics of a design discussion, to clearly communicate the different framework categories, thus assisting designers and other stakeholders in thinking about playfulness. Two associated idea-generation techniques—namely PLEX Brainstorming (Figure 5) and PLEX Scenario—were also devised to guide and provide structure when using the PLEX Cards.

Another practical tool developed in the context of design activities is the PLEX Design Patterns. The patterns are an example of a design language that lets those involved in the design process ponder and consider the implications of their design choices toward reaching a final design. The PLEX Design Patterns consist of causes-consequences pairs that describe the occurrence of a given pattern in interaction design and how it affects the overall user experience.

EVALUATING PLAYFUL EXPERIENCES

More recently, we investigated the use of the PLEX framework in the evaluation of interactive products and services [6]. Our aim was to study whether PLEX could both help conduct expert evaluations and ultimately be used as a checklist when assessing different aspects of playfulness.

Three interrelated studies of two mobile phone games called Snow and Veggie were conducted. In the first study, researchers actively used the PLEX framework to conduct an expert evaluation of the two games. The second and third studies were conducted without using the PLEX

framework to verify the findings from the previous expert evaluations. These last two studies consisted of interviews with professional game designers from Rovio, the makers of Angry Birds, and with the developers of the aforementioned Snow and Veggie games from the Finnish gaming company Kuuasema. Triangulating these studies allowed us to reflect on and identify the strengths (e.g., simplicity) and weaknesses (e.g., rigidity) of the PLEX framework as a tool for evaluation. To assist everyday people in evaluating concepts and designs on playfulness, we propose further specifying each PLEX category into sub-items or -attributes so that the different components of a category can be more easily identified.

We have so far identified and discussed the relationship between research on gamification (or gamefulness) and playfulness, and described how the PLEX framework came about and how it has been used in practice during design and evaluation activities. We will now explore the larger relationship between playfulness and user experience (UX) research.

PLEX AND USER EXPERIENCE

Understanding pleasure has been at the core of the UX community for more than a decade now. Patrick Jordan, for instance, in his book on designing pleasurable products [7], employed Lionel Tiger's framework to differentiate four sources of pleasure: *socio-pleasure*, the "enjoyment derived from the company of others," *psycho-pleasure*, the type of pleasure "that is gained from accomplishing a task," *ideo-pleasure*, the "pleasure derived from 'theoretical' entities such as the aesthetics of a product and the values it embodies," and *physio-pleasure*, the "sensual pleasure that is derived from touching, smelling, hearing, and tasting something." Similarly, Marc Hassenzahl distinguished between different forms of what he termed hedonic quality: *stimulation*, the product's ability to stimulate and enable personal growth; *identification*, the product's ability to address the need of expressing one's self through objects one owns; and *evocation*, the product's ability to evoke memories.

We believe that the PLEX framework further advances our inquiry through providing a more fine-grained

understanding of pleasurable user experiences. Take, for instance, social experiences. Jordan defined socio-pleasure broadly as the "enjoyment derived from the company of others," while more recent models have emphasized a distinction between popularity and relatedness. The PLEX framework identifies *nine* distinct manifestations of socio-pleasure: from the experiences of *sympathy*, *nurture*, and *eroticism*, when individuals share their emotional feelings with, take care of, or feel sexually attracted to others; to the experiences of *submission* and *fellowship*, when individuals conform

Figure 5. The PLEX Brainstorming technique in action.

to the rules of a larger structure or community, inducing a sense of partnership with others; to the seemingly opposing experiences of *subversion*, *competition*, *expression*, and even *cruelty*, when individuals derive pleasure from breaking social rules and norms, competing with others, expressing their selves in a creative manner, or causing mental or physical pain in others.

Similarly, while Jordan defined psycho-pleasure as the type of pleasure "that is gained from accomplishing a task," and later models attempted to distinguish competence from stimulation, the PLEX framework identifies seven facets of psycho-pleasure: from *captivation*, the experience of losing track of time and awareness of our surroundings as we increasingly engage with an activity; to the experiences of *challenge*, *control*, and *completion*, as individuals engage with and become competent

in physically or mentally demanding tasks; to the interrelated experiences of *exploration* and *discovery* and even *humor*, when products perform an action in a surprising way, such as a toaster that burns a figure on a slice of bread.

Next to this, we find different PLEX categories that force us to think of users' interactions at a different timescale. Some draw the focus to the *momentary* experiencing of playfulness—for instance when designing for the experience of captivation, when individuals lose track of time and awareness of their surroundings. Others emphasize the *episodic*—for instance when designing for the experience of completion that occurs when individuals reach closure on an earlier tension, which is associated with feelings of satisfaction and achievement. Still others emphasize the *long-term*—such as when designing for fellowship, the experience of a long-lasting emotional bond that is often tied with feelings of intimacy. In doing so, we believe that the PLEX framework not only advances our understanding of pleasurable experiences, but also guides us more effectively in designing for pleasurable experiences.

BEYOND PLAYFULNESS AND GAMEFULNESS

Returning to the initial question of whether video games could serve as inspiration to engage people and help them achieve their goals, both our PLEX work and gamification are showing the way to create better user experiences, albeit from their slightly different yet complementary perspectives—namely, those of *paidia* and *ludus*, respectively. More companies are deciding to take the leap and include aspects of playfulness and gamification (or gamefulness) as part of their business strategies, based on some successful real-world examples mentioned earlier. However, PLEX (and to some extent gamification) is biased toward positive experiences, with only three of its categories—namely *cruelty*, *subversion*, and *suffering*—exploring negative aspects of playfulness. Other experiences, such as disgust, tragedy, or shame, can at least partly be experienced as some sort of play and

thus have at one point been considered for inclusion in the PLEX framework. A broader understanding of both positive and negative playful and gameful experiences could provide richer, more profound, and perhaps more meaningful experiences to people, ones that feel closer to their everyday lives.

ENDNOTES:
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