

Beyond Gamification: Enhancing User Engagement through Meaningful Game Elements

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ABSTRACT

This research, through an ethnographic approach, has the aim to find digital game design elements, that could contribute to engage users deeply even in non recreational contexts, such as the Quantified Self services.

Categories and Subject Descriptors

H5.2. Information interfaces and presentation (e.g., HCI): User Interfaces.

General Terms

Design, Human Factors.

Keywords

Gamification, Ethnography, Motivation, Emotions, Engagement, Quantified Self.

1. INTRODUCTION

One of the trends that seems to characterize contemporary society is the increasing importance that the gaming and recreational aspects are taking into the people's daily lives. Games and their related mechanics are gradually expanding beyond their traditional borders, spreading in many areas of social interaction and communication [15]. Huizinga in *Homo Ludens* [11] stressed that one of the main features of games is to place the player in another world, separated from that of everyday life, confining the game scope in precise and well defined space-time boundaries. "Play is not "ordinary" or "real" life. It is rather a stepping out of real life into a temporary sphere of activity with a disposition all of its own. [...] It is played out within certain limits of time and space. It contains its own course and meaning." [11] Roger Caillois [4] confirmed gaming as a separated activity from the ordinary life and classified playful practices on an axis ranging from free play, *paidia*, to formal play, *ludus*. *Paidia* consists of informal playful activities, such as children's play, illusionistic games, rhymes, whereas in *ludus* the role of the rules is essential and it is well exemplified by soccer or baseball. However, today it

seems that the distance the games create between the ordinary world and the world of play, that Huizinga and Caillois considered to be one of their key characteristics, is gradually decreasing. More and more we find in everyday communicative and social practices elements proper to *ludus*: the game mechanics have invaded, in a more or less explicit way, fields traditionally connected to the ordinary life or areas that in the past were inspired more by the free spirit of *paidia*. Some recent years growing phenomena are undoubtedly indicative: *serious games* [16], that draw and mix together serious and fun scopes with educational and informative purposes; *casual games* [12], designed to be played at any time of the day and targeted to those segments of the population that have always been refractory to the world of video games; and *pervasive games*, in which the boundary between the everyday life and the game becomes more fragile and evanescent [18]. But nowadays this phenomenon is catching on more in Internet communications, digital interfaces and interactive systems: a growing number of non-recreational web services and mobile applications make use of game mechanics, removing the barrier that separates the "serious" and the "fun" world and offering an experience that has as main objective the enhancement of user engagement. The name given to this phenomenon is *Gamification*, an umbrella term that refers to the use of elements borrowed from digital game domain, in order to improve the overall user experience in non recreational applications and services [9]: since few years now this practice is doing animatedly discussing the HCI community.

On a closer view, the idea of blending the video games world and the interactive interface design is an old topic in the field of HCI studies: the notion of *funology* [17] took inspiration from game design to create an enjoyable and pleasant interactive interface usage experience. Also a branch of studies related to the Persuasive Technology [10], inaugurated by Fogg, looks at game mechanics to change people behaviors through the design of technological artifacts. But gamification, as "*the use of game design elements in non-game contexts*" [8], is still a very new topic in human-computer interaction studies. If we look at the scarce literature about it [e.g. 21, 26] we see that, for now, gamification means to look at a set of techniques taken directly from the video game design with the main purpose of increasing the involvement in "serious" applications. These techniques can be ascribed mainly to visual elements commonly used in video game interfaces (e.g. the progress bar in *LinkedIn*), mechanisms for rewarding (e.g. the level climbing in *Gomiso*), features for creating challenges among users (e.g. *Nike Plus*), recognitions of status (e.g. the badges in *Foursquare*) [2]. The impression, however, is that we are not yet fully exploiting the possibilities that the game mechanics can provide to the design of interactive

systems. Since now, the gamification seems to be still looking only at the use of reinforcement programs, typical of the Skinnerian operant conditioning, to merely dress the surface of interfaces and services. The implementation of this logic brings just to the trivial obtaining of repetitive prizes, and not to the rising of a profound and engaging experience. For these reasons, Margaret Robertson [23] has proposed the term “pointification” to characterize these phenomena. And for the same motivations, the HCI community is wondering whether we should go beyond the current gamification practices [13], looking at video games not to create automatisms, based on getting extrinsic awards, but to offer deep experiences, involving users through social, narrative and spatial components: the final aim is to transform the gamification research from a tool to simply push people to use a service in a mechanical way, in a way to establish new engaging habits and develop inner motivations that could promote a change towards meaningful and better behaviors.

This research, starting from the player point of view instead of that of the game designer, will try to find those elements, in the video game environments, that contribute to motivate users to accomplish difficult tasks, cooperate and compete for an aim, be moved in a world that allow them to construct their identities and their desires. In the first phase, an ethnographic research will be conducted. Aim of this part will be to investigate how players are engaged in a digital game, in order to discover meaningful elements that can involve users in a deep manner. The expected result is a set of guidelines that could be used in non recreational contexts to promote behavioral change and enhance user engagement. The second phase will consist in the design of application features and service rules, driven by the guidelines found in the first phase. The selected application domain in which experimenting the efficacy of these drivers is the emergent field of Quantified Self (QS) services, that through self-tracking mechanisms have the ambition to change and improve people habits towards better behaviors.

2. FIRST STEP: AN ETHNOGRAPHIC RESEARCH OF WORLD OF WARCRAFT

In recent years, MMORPGs (Massively Multi Player Online Role Playing Games) have grown tremendously in size and complexity, involving millions of players around the world. From this point of view, they are the most interesting phenomenon to be investigated, in terms of user motivations and experiences that can determine a deep engagement, able to last for a long time. Among these, World of Warcraft (WoW), with over than 12 million currently active players [3] is the most popular MMORPG available on the market: players live and combat in a fantasy world, slicing monsters, trading goods and fighting in battles, quests and duels. Since this is “a game that ‘hits on all cylinders motivationally’, creating a deep and enduring loyalty in its audience” [22], psychologists have seen in this world a perfect example for their theories that try to explain how video games glue their player to the screen [22]. On the other side, many studies of WoW [e.g. 19, 7, 20] have adopted an ethnographic approach, combining participant observation and contextual interviews, to trace its social structure, individuate rituals and everyday practices, highlight opportunities for achieving self-fulfillment, investigate peculiar phenomena as addiction and opposition between work and play. Still, much of these ethnographic researches have focused on online interactions without strongly connecting personal experiences and social phenomena with the design strategies that structure the

community behind the game or condition the user actions. How the players see these design strategies and how are they engaged by them? What causes the emotions, experiences, and involvement to be at a certain stage? In addition, the gaze of the ethnographer has never been directed with the aim of individuate design elements able to be translated, with appropriate transformations, in other contexts, in order to create playful experiences even in services that don’t have the entertainment of their users as their main purpose. Through a reflexive ethnography approach [5], the first objective of this research is to individuate elements capable of determining deep engagements and inner motivations in WoW players. The reflexive approach, distancing both from the realism of the quantitative sciences and from the constructivism of the postmodernism, retrieves the objectivity of the ethnographic observation through the reflexive description [1], making explicit what we are experiencing (i.e. through the constant report of the observation relationship which includes the description of the ethnographer himself). The author will conduct an observant participation for a period of a year: the ethnography have started in the end of October 2012 and will end in November 2013. The results, such as personal experiences, shared meanings, sedimented habits and informal rules, will be interpreted in the light of the most recent motivation and social groups theories in cognitive psychology: then, they will be connected with those design strategies that influence the “shapes” of actions and groups in WoW. The final aim is to identify which game and community design elements are the most suitable to favor the emergence of long stand involvement in the players and to be transferred in non recreational services. The expected result is a set of gamification design guidelines for enhancing the overall user engagement, not only on the basis of reinforcements that could strengthen specific responses, but giving to the users meaningful experiences and encouraging the development of deep emotions and motivations. These guidelines will be compared to the current trends in gamification industry, in order to highlight the lacks in the current gamification landscape.

3. SECOND STEP: DESIGNING PLAYFUL INTERACTIONS FOR QUANTIFIED SELF SERVICES

The Quantified Self is a school of thought which aims to use the miniaturization of sensors and devices in order to acquire and collect data on different aspects of people everyday lives: they could be physical or mental “states” (e.g. the mood, the oxygen level in the blood) or parametric indicators of performance and activity (e.g. the kilometers run, the mail sent). The purpose of collecting these data is the self-monitoring, in order to change or improve behaviors, psychological or physical states, health habits. However, the impression today is that the QS movement is more interested in collecting numbers and transforming them in beautiful representations and visualizations than improving people daily activities. In fact, often the discussion is simplified in these terms: having greater awareness of one’s data is sufficient to determine a behavior change for the better in that individual. But the mechanisms that govern the behavior change are complex [14]. It is not enough to look at our weight measured by a balance (awareness) to make us want to do more physical activity: lifestyles often struggle with an underlying inertia, which continues to persist even after the individuals have been properly informed and educated; researches have also shown how often, during their daily lives, people do not rely at all on rational choices, but on irrational methods, such as heuristics and rules of thumb [24; 25]. If the simple presentation of data and the

awareness of one's own condition are not enough to motivate people to modify their habits, searching in the digital game world elements that could encourage the behavior change seems to be a way that could almost be tried: the ways in which the players perceive themselves, the shape of the user communities, the shared understandings, and the fulfillment of needs of achievement and power that the game design strategies favor are all elements that could be used, once properly understood and contextualized, in QS services. From these premises, we aim to take the findings gathered in the first phase of this research, transform them in drivers suitable to the QS context and implement them in the design of rules and features for QS applications: these design elements, in addition to tracking and presenting human behavior data, could be able to deeply engage users for a long time and promote a change towards better habits, with the purpose to achieve ambitious goals such make users happier, more social, or more efficient in the achievement of their objectives. This design activity will be conducted in the last year of my PhD program.

4. PRELIMINARY RESULTS

The first personal impression is that MMORPGs, leaving players the possibility to evolve their own avatars into different forms, depending of the choices made, favor reflection about the actions accomplished, the objectives achieved, and the transformations they have produced on their own identity: this way of awareness is completely different from the static or even dynamical presentation of personal data in the current QS applications, since players can see themselves from different perspective stimulating the critical thinking about their past actions. QS services could draw on these design strategies, forms of spatial and temporal representation and evolution, to reinvent the display of human behavior data. In addition, the shape of the social group interactions, that in WoW are well exemplified by the guild system, could be transposed, once accurately transformed, in QS services, to fulfill the user needs of power and exploit the peer pressure to determine a behavior change. Obviously, all these aspects, and many others, will have to be investigated more in depth in the next months; and even the drivers that we expect to find will have to be carefully balanced and properly adapted to the new context of QS, for implementing design elements that could be really meaningful to their users.

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