A Model of Game Design Activity: New Perspectives on Creativity and Innovation

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Abstract
Innovation and creativity seem to be mere buzzwords, but the quest for innovation and creativity by game companies is very real. This Ph.D. dissertation suggests adopting a new perspective on these concepts by abandoning a managerial attitude and favoring a design approach. The design process of video games is understudied, and this research aims to create a model of video game design activity, using the already existing literature in the field of design, and the observation of actual game designers in Montreal.

Author Keywords
Game design; design thinking; innovation; creativity

ACM Classification Keywords
K.8.0 [Personal Computing]: General – Games

Research Situation
The Ph.D. in Environmental Design studies at the University of Montreal is a two-phased process. During two to three years, students take different courses and prepare their comprehensive exam, after which they can start their data collection and dissertation. I am currently at the end of my second year and I plan on taking my comprehensive exam soon.

Environmental Design (as it is translated from Aménagement in French) is a broad field: I am working with Prof. Rabah Bousbaci from the Design School, and my specialty is video game design. The University of Montreal also has a video game department that is part of Cinema studies, but I chose the Design School in order to provide new and original insights about video game creation. The faculty is currently building this
video game design department, and I am one of the first two Ph.D. students in the program. This situation leads me to feel rather isolated, and the doctoral consortium would be a valuable opportunity to interact with students and experts in the field of interaction design, and to challenge my approach.

Context and Motivation
Creating new Intellectual Property (IP) in the video game industry appears challenging [1]. For example, in 2012, Funcom launched a new IP: *The Secret World*. Unfortunately, the game did not take off. This situation has been assessed mainly in terms of poor commercial and managerial decisions. The point of view of creators was not considered as a determining factor [2].

Around the same time, I was meeting game designers from the Montreal game area for my Master's research. My interviews presented attention-grabbing results: game designers from different companies, responsible for the core features of games, were encountering trouble understanding their role. They often feel powerless when they need to justify their work. This reinforces the literature acknowledging that management or marketing departments often challenge creative employees’ decisions [3]. This was particularly clear when my participants were working on projects with new elements, such as a new audience, or new Intellectual Property. More specifically, my results pointed out a lack of theory about game design activity. What does a game designer do? How do game designers think in action? What is the "creative process" of game designers? How and when does "creativity" happen? This conjunction of events brings me to the hypothesis that tackling the problem of innovation from a design point of view might offer new insights about video game projects. Instead of blaming marketing or production choices, I would like to start documenting how designers work. I hope this will empower game designers, and give us new insights about creativity and innovation in the video game industry.

Background and related work
Innovation and creativity issues in the video game industry have primarily been defined and assessed by economic and management studies [1, 3-5], focusing mainly on product innovation (radically different video games) and ways to foster employee creativity. While much debate exists around the definitions of innovation and creativity, the fact I would like to underline is that authors insist on the importance of game design, and the lack of knowledge concerning creative processes: "The field still lacks an integrated view that more fully describes the creative process of a technological artifact" [5].

Innovation has also been studied from the perspective of game studies, especially by Annakaisa Kultima and her colleagues [6-8]. These studies acknowledge the importance of innovation and creativity as core value in the video game industry, even when their definitions are unclear. Once again, creativity is seen as the territory of game designers: "Furthermore, games are said to be idea-based products, where ideas can be seen as the outputs of creative acts and processes of game designers" [8].

However, game studies did not seem to have conducted any thorough study of game design activity. While a large number of game design books exist nowadays, literature reviews [9, 10] show that these
works are mainly focused on the games themselves, and Kuittinen and Holopainen conclude that “the activity called design is left with too little attention” [10]. Video game design is like a black box. Kuittinen and Holopainen suggest borrowing concepts from design studies to bridge this gap, but this remains to be done. A similar bridging started in Human-Computer Interaction: for example, Erik Stolterman [11] insists that the very nature of design practice should have an influence on interaction design research.

Statement of Thesis and Research Goal
Video game research needs to encompass innovation and creativity challenges from the point of view of design. This implies a better understanding of game design activity and creative processes, and a clearer view of the manifestation of creativity in those processes. This could be achieved by bridging the gap between video game studies and design studies, and by diving into current practice.

The main research goal is to theorize video game design activity, with a focus on the creative dimension of the design process. The theorization will take the form of a model of video game design activity. Two main steps are guiding the elaboration of such a model:

1. Diving into existing literature to elaborate a conceptual model. This model not only has to give a rich vision of design activity, but also must define and highlight the creativity behind game designers’ actions.
2. Collaborating with actual game designers to enrich the model. Observation and interviews will allow for confirming, modifying and transforming current design theories.

These steps will be taken iteratively to produce a descriptive model. The goal is not to produce a recipe to enhance designers’ creativity, but to accurately depict their actual practices and better understand the creative dimensions of what they do.

Dissertation Status
I am currently gathering the existing literature to elaborate a first draft of the conceptual model, which I would like to discuss at the doctoral consortium.

The study of designers’ creative process has been regrouped under the term “design thinking”, and design thinking research already considers innovation. However, there are now two radically different understandings of design thinking: one is drawing from design studies, while the other from the managerial field. The management discourse is very popular nowadays and tends to shatter the design discourse. This is a problem, as the management discourse tends to have “a more superficial and popular character and is less academically anchored than the designerly one.”[12]. However, the design discourse is fragmented with several visions of design thinking, making it difficult to grasp.

Using my Master’s research experience, I chose to draw from one of the most important design approaches of design thinking: Schön’s model of reflexive practice [13]. He constructed a theoretical model of design activity as a reflective conversation with a situation. According to Dorst [14], studying the framing of design situations is a promising track to foster innovation. However, creativity issues are not directly dealt with in Schön’s model. Thus, I am revisiting the literature surrounding Schön’s work, especially the work of the pragmatist John Dewey. According to the philosopher Hans Joas [15], pragmatism is a philosophy that allows
taking the creativity of human action into account, and defining it in contrast with a rational vision of human action. I am trying to bring these pragmatist influences in Schön’s work to the foreground, in order to enrich and further Schön’s conceptual model. I would therefore like to discuss this work at the CHI doctoral consortium, since interaction design has a well-known interest in pragmatism, experience (for the users but also for the designers) and creativity.

Expected Contributions
The model of video game design activity will show how and when creativity occurs in game designers’ design processes. I hope this will help in understanding how video game projects can rely on designers’ creativity, and in creating innovative products. The model will be specially designed for video game design, but it might also be useful for interaction designers, or any form of design.

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References