

## **EXTENDED ABSTRACT**

**Teaching Research-Creation in game design: achievements and limitations of a still  
developing course**

Sylvain Payen

## **Teaching Research-Creation, teaching emotion in games**

Research in game design is an emergent field, only a few decades old. This relative youth does not make it not fundamental to the development of game studies. However, we might observe that a large number of the use of games for research projects are not motivated by the study of game design but by a specific and distinct research objective.

The subfield of research on the emotions in game is fundamental to understand the player experience and so to design games to target a specific experience (Järvinen, 2008). The study of emotions in games, and even more the study of emotions induced by play dynamics and not through the narrative, uses most of the time existing games and very often analyzes them through a methodical form of personal introspection (Perron, 2012; Eichner, 2016 ; Frome, 2016 ; Isbister, 2016). Because the creation of a game is time-consuming and expensive, the research-creation approach in game design remains uncommon. It is even more rare and delicate when it comes to the creation of complex games likely to deliver a specific emotional experience. A project that requires the coordination of a team.

It is with the aim of introducing aspiring researchers to the challenges and needs of research and creation, but also to introduce them to the subject of emotion in games through practice, that the graduate course: Topic in game research: emotion in game was initiated.

### **Goals and intentions**

This course has been created to answer three main objectives.

The first is to create games whose design would be conceived with the aim of making the player experience a precise and defined “affective journey”. The difficulty being that the sub-area that seems the most relevant to explore – because still mostly unknown - corresponds to the so-called "gameplay emotions" (Perron, 2005). The gameplay emotions are defined by Perron as

“the emotions arising from our actions in the game [...] and the consequent reactions of the game”. Designed in accordance with research analyses of the emotions in play (Frome, 2007, 2019 ; Lazzaro, 2004) and well-established studies in the field of emotions from cognitive psychology (Frijda, 1988 ; Keltner & Haidt, 2001; Forgas, 2008) and some of them in particular, these games may then be tested and the results compared to our design expectations.

The second objective was simply to introduce the graduate students to the research and creation in game. Indeed, many game scholars developed a very deep analytical approach to study games, however the creation of most of the games and thus their apparent design intent remains deeply influenced -if not directed- by material constraints of any kind. In this sense, a game development studio is as much concerned with the question of their editorial goal as with the ability of the team to reach it and attract a potential audience.

The third objective was to encourage collaboration on an equal level between graduates in a perceived competitive environment. Due to lack of budget and visibility, the most difficult to acquire for an emergent game researcher is a network of collaborators that will not only stimulate them intellectually, but also allow them to achieve more advanced goals.

### **Breakdown of the course and game productions**

The course was designed to accommodate a predominance of senior undergraduates and a minority of graduate students. It was structured with a first period to introduce the fundamental articles about emotions in cognitive psychology and then on the different research axes of emotions in video games. This part contained discussions about the research articles led by graduate students under the direction of the professor. This was followed by the creation of teams and game projects following a typical simplified production structure that will follow throughout the course: pitch, first playable, alpha and release candidate. Each week is then

divided between studio time and lecture, students' presentations and discussion of articles on specific emotions (1- Anger and frustration; 2- Joy; 3- Fear; 4- Shame and Guilt; 5- Pride; 6- Disgust; 7- Jealousy and Envy; 8- Empathic spectrum).

The last four weeks of the course was reserved for the playtest and the primary analysis of the results. Throughout the production, the team also had to produce an experimental protocol and a post-test questionnaire to evaluate the results of the playtest.

### **Limitations and misconceptions**

While the course brought many positives, it remains important to highlight a number of fundamental failures. The first one is that for reasons beyond our control (scheduling issues and conflict with other courses), the ratio of students in the course was completely reversed with 4 undergraduates for 10 graduates. It was planned that undergraduate students would be in charge of production (as part of their degree) and graduate students would be in charge of the scientific dimension. Our graduate students come from a variety of backgrounds related to game studies and are not yet experienced in game development in a team. We were able to create two teams balanced in skills, however in addition to the unfamiliarity with teamworking, a lot of skills were missing and were learned on the job.

This first issue has increased the importance of the second risk, underestimated although anticipated. Lack of experience leads to unrealistic and uncontrolled ambition. It is a common phenomenon to not be able to reach all the goals defined during the concept phase of the development. The constant delays in production combined with the frequent crunch phases in well-known studios are proof that this lack of control and over-ambition is common even among experienced developers. The difference, however, is the early awareness of the impossibility of

achieving the desired goals, in order to make the cuts early enough. Even if the impossibility was noticeable, the mistake was to wait for the teams to realize it by themselves.

From there, another common difficulty had been incorrectly anticipated. In a just-in-time production, the design is imposed by the limits. In this sense, from the second half of the production, the students no longer realized the game according not realize the game according to the emotional design defined by their research, but instead modified their intended design to fit the project produced. This approach is not necessarily entirely invalid in the sense that in research and creation it is necessary to remain alert to discoveries that are not anticipated during the concept phases. However, it is difficult for the researcher and even more for a graduate student to embrace this change, they are more likely to seek a compromise between their realization and their research goal.

And finally, a last point arising from the three previous ones, the articulation between research goals, theoretical texts and game design became particularly difficult. To be able to readjust both technically and theoretically in a really short period was not feasible for students.

It is also worth noting that the authorization by the ethics committee for the playtests took longer than expected, so they could not be organized within the class, which allowed for a longer production time.

### **Results and conclusion**

Despite these extensive critiques, this course achieved a number of the initial objectives.

The students in two teams, many of whom had never created a video game before, managed to complete their production with a game polished enough to be played on its own without explanations. One of the two games is particularly well realized.

Both games are in line with a scientific question about emotions in play and are able to be tested and provide data that will be relevant to game creators (after university approval of the protocol).

Through practice the students discovered the subject of emotions in games and became interested in the research work done in this very specific field where in a classic course they would have remained in their introspective and personal interpretation of emotions.

This course permits them to write a scientific article about their approach and the project they created. In addition, this class allowed them to have an introduction to how a research project is built and what a game lab can be, long before they had the opportunity and means to be in charge of it.

However, in order to produce consistent emotional induction game projects that can be studied on the same basis to provide truly applicable results, the next iteration of the course will require a number of changes. The objective, the duration, and even the type of game will have to be mastered with more rigor, for example by providing a certain number of precise concepts already pre-defined by the instructor. The projects should be much simpler and aim at a much more precise affect.

Thus, the experimental protocol could be common and known in advance allowing a faster validation by the university.

Research by design is a particularly important component of game studies. This experience has provided a rich initial approach for our students, and it is necessary to pursue in this direction.

## References

- Eichner, S. (2016). Representing Childhood, Triggering Emotions: Child Characters in Video Games. In B. Perron , & F. Schröter (Eds.), *Video Games and the Mind: Essays on Cognition, Affect and Emotion*, 174-188. McFarland.
- Forgas, J.P. (2008). Affect and cognition. *Perspectives on Psychological Science*, 3, 94-101.
- Frijda, N.H. (1988). The laws of emotion. *American Psychologist*, 43, 349-358.
- Frome, J. (2007). Eight ways videogames generate emotion. In Akira, B. (Ed.), *Situated Play, Proceedings of the 2007 Digital Games Research Association Conference (Vol. 4, pp. 831–835)*
- Frome, J. (2016). Video game sadness from Planetfall to Passage. In B. Perron , & F. Schröter (Eds.), *Video games and the mind: Essays on cognition, affect and emotion*, 158-173. McFarland.
- Frome, J. (2019). Interactive Works and Gameplay Emotions. *Games and Culture*, 14(7–8), 856–874. <https://doi.org/10.1177/1555412019847907>
- Isbister, K. (2016). *How games move us: Emotion by design*. Mit Press.
- Järvinen, A. (2008). Understanding video games as emotional experiences. In B. Perron & M. J. P. Wolf (Eds.), *The video game theory reader 2* (pp. 85–108). New York, NY: Routledge.
- Keltner, D., & Haidt, J. (2001). Social functions of emotions. In T.J. Mayne & G.A. Bonanno (Eds.), *Emotions: Current issues and future directions* (pp. 192-213). New York: Guilford.
- Lazzaro, N. (2004) *Why We Play Games: Four Keys to More Emotion without Story*. XEODesign, Inc., Oakland, CA.

Perron, B. (2005). A Cognitive Psychological Approach to Gameplay Emotions. DiGRA Conference.

Perron, B. (2012). Silent hill: The terror engine (p. 171). University of Michigan Press.