The Organic Nature of Game Ideation: Game Ideas Arise from Solitude and Mature by Bouncing

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ABSTRACT
Producing new ideas may feel like an easy and automated task or even something mysterious, as ideas seem to come out of nothing, sometimes in weird situations, and designers rarely run out of them. Based on the interviews of 23 Finnish game designers and game professionals responsible for new ideas from 8 different companies, it is clear that ideas do not come about by accident. Game designers have different means and ways of affecting the process as well as different views on what a game idea is and what role game ideas have within the production process. In this paper, I will present the findings of the aforementioned interview study and discuss the implications of this study for the development of systematic approaches to game idea generation.

Categories and Subject Descriptors
K.8.0 [**Personal Computing**]: General – *Games.*

General Terms
Design, Human Factors

Keywords
Game design process, ideation, idea generation, brainstorming, game ideas, creativity, innovation.

1. INTRODUCTION
The game industry is one of the "creative industries," which means that it is characterized as a "new" industry based on the creativity of individuals and that it has different properties and higher future growth prospects than some traditional technology industries [27]. However, competition between game companies is getting more and more intense as fewer games per year will be profitable [18, 11]. This competition drives game industry professionals to seek the ways and means to enhance and develop their production processes to get a competitive edge. One way for a game design firm to ensure creative output in the form of successful products is to gather versatile and talented teams of people, or provide a supportive and inspiring atmosphere that will foster creativity. These are some of the core values of game design companies, but more could be done. At Game Developers Conference Europe 2009, the panel of female game professionals addressed the issue of versatility of developer teams. Game companies should go even further with their efforts to support innovation and foster different perspectives on game design; in other words, they should recruit "outside their comfort zone." Thousands of highly talented and creative people work in the game industry, but these numbers do not translate into the automation of the creative process. Even the most creative person can find herself struggling to fight against repetition.

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 [28]. Another strategy to stay fresh, creatively speaking, is to enhance the processes of idea generation, a task that is generally recognized as a critical part of innovation [6]. Even within other industries, the ability to generate ideas is shown to be one of the characteristics of successful business ventures [19]. Yet these processes bear closer examination, particularly in the context of the game industry.

Although the processes for developing new ideas may sometimes feel mysterious, idea generation is relatively structured and explicable [20, 22]. This structure enables the use of systematic approaches for enhancing creative processes. Importantly, systematic approaches to the creative process make a difference in the broader game design process: A study of game design post-mortems indicated that many of the difficulties with certain game productions were due to the lack of systematic approaches to their design processes, while other game productions gained advantage on rationalizing their design processes [26].

Generating new ideas may feel like an easy task that does not require enhancement or a systematic approach. However, studies show that creativity training has the highest impact on originality of the ideas [6, 14]. As the mind is very efficient in creating patterns of thinking, there is a need to purposefully affect the processes in order to change the course of the ideas [4].

One of the most popular systematic techniques for generating new and creative ideas is *Brainstorming*, and it is known to be used among game designers. Unfortunately, this technique does not necessarily lead to innovation [19], and there are reports about disappointment with brainstorming as a tool within the field of game design [10]. Brainstorming is a relatively broad concept, however, and has become such a popular technique that it can nowadays refer to many different forms of group ideating.

Brainstorming has a long history that dates back to the 1930s. In the years since, several studies of the effects of this particular technique have enumerated both the benefits and the problems of

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brainstorming [9]. One of the most important findings suggests that, for the successful use of brainstorming, the conduct of the brainstorming session is crucially important because an experienced facilitator is required, as he or she prepares and guides the process [23]. But despite the known problems with brainstorming, such as production blocking and social loafing [9], pivotal virtues of the technique have been transferred into variants such as *Brainwriting* and original approaches such as *SCAMPER.* Studies indicate a strong relationship between the number of idea generation techniques and the number of successful products [21, 24].

Innovation within games industries is considered to be mainly incremental [7] and it seems to be rather common that ideas are drawn from other games and similar domains [13]. Even though game companies are making profit with their existing intellectual property (IP) by producing sequels or sure hits, there is a need to create new IP and genres to attract new target groups and to evoke new gaming experiences [12, 7]. Idea generation techniques could support both processes: coming up with certain improvements or widening the perspective of game designers.

It is important to note that creative processes are said to be domain specific [2, 6, 14]. Creative performance in any domain requires domain-relevant skills, creativity-relevant skills, and task motivation [1]. Despite these facts, much of the research on brainstorming is concentrated on psychological or managerial factors of idea generation. Relatively few studies have been conducted on specific creative processes within game design, not to mention development of tools that improve game idea generation practices.

Despite the possibilities of systematizing its processes, game design should be seen as an organic process. Game designers are already highly creative in their work. In order to really support the practices of game designers, one must gain an understanding of designers' current practices, particularly in terms of observing the kinds of situations that game designers face today.

In the next section I present the findings of two interview studies conducted in 2005 and 2007 concerning game design practices. I will also discuss implications for the development of idea generation tools and implementation of different techniques into design practices that these findings may have.

2. THE INTERVIEWS

The data for this study consist of two separate interview settings. The first round of interviews were conducted in 2005: 8 game professionals from 6 Finnish game companies were interviewed about issues concerning their design processes. The second round of interviews were conducted in 2007 in connection with a study of the game idea generation toolset that was developed for the GameSpace[1] project. Designers and other game professionals who were responsible for creating new game ideas were asked to describe their experiences of coming up with new ideas. The questions asked were related to informal and formal approaches, interviewees' views on the structural parts of game ideas, and the role of game ideas in the production of games, and all in the context of their opinions of creativity in general.

The interviewees were mainly mobile game designers, but some professional money game, console game, and social game designers were interviewed. Some of the designers were interviewed multiple times in both 2005 and 2007.

In total, 23 game professionals from 8 Finnish game companies were interviewed about their design practices. The interviews were semi-structured, thematic interviews, in which the interviewees could freely describe their perspectives on the subject matter. In the first round of interviews, idea generation practices were discussed only as a side topic, while the second round of interviews concentrated mainly on idea generation practices.

3. INTERVIEW FINDINGS

In general, explicating the details of game design processes, especially the idea generation, seemed challenging to the game designers and other game professionals. Game design is an organic process, where one moves according to the situation using related insights and task-specific skills, drawing from their specific experiences in order to end up with quality products. It is difficult to put such practices into words, especially when so many factors are dependent on the game at hand or the people involved. The lack of specific education also affects to the reflection process. Most of the interviewees had no more than a couple of lectures, conference speeches, or workshop days designated for learning brainstorming and ideating skills. Despite this lack of training, many interviewees were able to describe their activities and approaches in relation to their creative processes, either as situational factors or purposeful acts. They had developed their processes through time and personal experiences.

3.1.1 Is it easy for you?

Even though it is easy to come up with game ideas, it is not very easy to come up with good ideas, or with ideas that others like, or with ideas that could become produced as games. This findings became quite evident in the course of the interviews, even though most of the interviewees claimed that coming up with ideas was easy. Some interviewees expressed what a natural, pleasurable, and constant process it was for them, a process that originated in childhood.

Yet there were also some descriptions about the difficulty of coming up with new ideas. For example, even though ideas may be flowing, they may not be good or applicable ones. In these cases, interviewees said they were often hindered by self-criticism, which slowed down their flow of ideas, and said that some kind of help was needed. They sought help using different individual techniques and through group sessions. Sometime the techniques were learned while working for their current game design companies, and other times they brought ideation techniques from their previous jobs outside the game industry. Broadly speaking, however, most of the approaches to ideation were informal.

3.2 Informal approaches

The fact that game ideas may be inspired by many different sources does not mean that they do not have any source.

[1] GameSpace project studies the methods for designing and evaluating casual mobile multiplayer games and is organized by the University of Tampere.

Interviewees were able to explicate the situations in which they came up with ideas, or the purposeful acts that led to new ideas. Some of the approaches were similar among the game professionals, although individual differences were expressed. Of course, it is quite probably that they did not discuss all of the approaches they used.

3.2.1 Seeking inspiration

Ideas were seen as coming out from various inspiring sources. The most commonly expressed sources of inspiration were reading, watching television shows and movies, or, not that surprisingly, playing other games. Some of the interviewees mentioned that the creative act of producing new ideas was about a certain attitude toward life, keeping your eyes open, since almost anything could inspire a new idea.

In this sense, inspiration could be something that game designers and other professionals seek for from a wide variety of sources. The quest for inspiration may be a more or less open process, but for some it may be a systematic, purposeful act for broadening their thoughts in order to bring about quality ideas. One interviewee mentioned that he subscribes to *National Geographic* in order to keep himself inspired.

3.2.2 Purposeful activities

It is not always that efficient to wait for new ideas to come around. For example, two interviewees described walking around or being out in the natural environment as helpful purposeful activities..

> *Walking helps, for me at least. If I have to do so that, for instance I have a given theme and I have to do a game around this theme, it is usually so that there is no such thing as brainstorming session. As I have noticed, that it does not suit to it. The problem is given to almost all designers to think by themselves. To me the best way to think it through alone is to go walking outside in the nature or somewhere, as it gives usually good results.* (Interviewee 1)

One interviewee explained how he got a clear visualization of the ideas in his head during long showers that he takes frequently. Retracting into solitude was seen important. Some of the interviewees mentioned that in cases of "writer's block," they would simply turn to other activities, letting their thoughts mature while actively processing something else. This approach probably works rather well in terms of creative input since the brain is affected differently by different stimuli and can produce a broader space in which ideas can flourish. In this sense, "giving up" could be considered a purposeful act toward the generation of new ideas.

3.2.3 Bouncing the ideas

It was frequently reported that initial game ideas were created mostly in solitude.

> *So far, they [ideas] have come as individual efforts so that there is the initial idea and then in some point you take others around it. But the earliest phases have always been carried out in solitude.* (Interviewee 2)

> *I really do believe in having the seed of an idea but also bouncing it of to many people to get that different point of view*. (Interviewee 5)

Many interviewees seemed to prefer solitude, even though some had faith in small group sessions. Some of the informal techniques they used actually represented their active search for peace and quiet. However, after thinking of an initial game idea (or the seed for the vision of the idea), almost all interviewees considered it important to bounce the idea off other people. Although brainstorming and other group techniques were also devised for initial game idea generation, group approaches were mainly reported as used for developing a particular idea or further ideation - sometimes even to evaluate existing ideas.

3.3 Formal Techniques

Interviewees found it especially difficult to explain the formal techniques they used for game idea generation. Quite often, such techniques were used only once or twice, or their names were hard to recall.

Generally, the interviewees responded positively to explicit inquiries about brainstorming and mind mapping activities. Either they were using such techniques regularly or they had some basic experience with them. Other techniques that were mentioned included techniques with sticky notes, Six Thinking Hats, Double Team[2], idea trees, and different slip techniques. There were also other techniques that were described, which were probably developed by the designers themselves. Such approaches included techniques of browsing Wikipedia before the actual brainstorming session or coming up with ideas by looking at particular photographs in a group meeting. One interviewee mentioned that he prototypes in order to evoke more ideas, not only to test existing ones.

3.3.1 Experiences with brainstorming

Brainstorming was cited as one of the most used techniques. However, many interviewees indicated that the process was not that systematized, or that they were not sure whether brainstorming sessions were conducted professionally. These responses support the position that "brainstorming" has become a general term for any group ideation process. Even though some interviewees reported that an external creativity consultant had guided their sessions, brainstorming sessions mainly seemed to consist of different kinds of informal group gatherings rather than actual formal sessions.

Some interviewees reported that they had gained enough experience to have opinions of successful brainstorming sessions. For example, one interviewee stated that in order to have a successful session, the facilitator had to be experienced and talented with the technique. Positive experiences seemed to flow from such sessions.

3.3.2 Problems with formal techniques

Some interviewees expressed the need for training of personnel. It was emphasized that sometimes people would not know how to act in given situations in order to gain benefit from the ideation process and not spoil the meeting for the others.

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[2] Double Team, or in Finnish 'Tuplatiimi,' is developed by Finnish innovation consultant company Innotiimi. In Tuplatiimi participants work with stated problems first alone and then in pairs, presenting ideas to the whole group at the end of the session.

It was also feared that some types of formal techniques could guide everyone's thoughts in a specific direction and not result in truly original ideas. This might be an indicator of the personal importance of game designers' own role as creators of new IP. Good designers are judged on the value of their creative thoughts, not on their skills to use ideation techniques. One interviewee said that group ideation meetings go too fast, leading to an inability to clearly express ideas and the suppression of those ideas through the critique of the others. This situation could lead the group to abandon a good idea or lead individuals to stop contributing because they no longer feel motivated. This notion of the critique was also expressed by numerous interviewees: too much critiquing was occurring and making them feel put down.. These descriptions of criticism are an indicator of the lack of training for creativity techniques and should be addressed in the development of processes of game companies as well as future game design curricula.

The number of participants was another problem with formal techniques, as some felt that there were sometimes too many people involved. Sessions ended up with blunt and bad ideas as a result. Similarly, some interviewees expressed the concern that even though the idea generation sessions were fun, the sessions did not result in immediately applicable ideas. Sometimes the ideas that were created were too far-looking into the future and could not satisfy the current needs of the team. This result created frustration over "ideating for the sake of ideating."

In general, interviewees had difficulty with the attitudes of others toward formal or group approaches. However, many interviewees reported that lots of good ideas came from the sessions, and they felt more inclined to take part after their first session. Unfortunately, practical issues, such as gathering the group into a certain session, took too long, and many interviewees were still relying on solitary activities to come up with new ideas.

Even though the emphasis in creativity research is on group processes, most of the initial idea creation that occurs in the field of game design still seems individualistic. While I am not suggesting that this model needs to be changed, this finding demonstrates that it will be a specific challenge for game designers to develop and adopt group-based, game industry-specific creativity techniques. At the same time, efficient solitary techniques should be developed and group techniques should be made lightweight in terms of resource needs and easy to adopt.

3.4 Of the Nature of Game Ideas

Interviewees defined game ideas quite differently, varying from one-liners to eight-page formal design documents. The initial form of a game idea was unlimited. On the other hand, interviewees did express some priorities in terms of the thematic or mechanical aspects of game ideas. Interestingly, interviewees described the mechanics as a key point for an idea more often than the thematic aspects.

Interviewees considered it important that, even though an idea may not eventually have anything to do with the mechanics of the game, the mechanics were inseparable from the early idea generation process. They sometimes regarded mechanics as the essence of the game idea since thematic elements could be modified later.

> *Well it can be anything. As such the idea can start from anything. It can begin from the theme, mechanic or any observation [--] but quite fast it takes the direction that I want to know about the mechanic. In my opinion it is vain to think about years and years, for instance that I'm doing pirate theme and then start thinking about characters and the world. [--]. Then it is better to do book or movie. In games mechanic and core-mechanic is the pivotal thing, so that even though you start from the theme, you need to get fast to the mechanic. Or at least this is what I want.* (Interviewee 3)

3.4.1 Idea as a starting point

In general, interviewees said that game ideas work as a starting point for game production rather than as a fundamental element of the game itself. However, some of the interviewees said that good ideas sometimes survived all through the production phase, giving an impression that they had a solid foundation that remained untouched in the finished game. In this sense, the function of an idea as a foundation was not abandoned either.

Resulting from these two types of experiences, interviewees seemed somewhat ambivalent about their approaches to game idea changes.

> *It is not necessary that the idea stays intact. Sometimes there are those exceptional cases where the idea is somehow very clear and pure and it is very straightforward to concept it and elaborate into details. In that way the pre-production is very successful and it makes the production itself as straightforward and there are no bigger crises and huge iteration rounds so that the fun part can be found. But then again there are also opposite cases, that there has been idea that seemed good and then you have started and gone with it upside down and it has changed completely, but still the end result have been something very valuable or it has been a commercial hit. [--] it is the outcome that counts.* (Interviewee 3)

> *I would prefer that there is some kind of iteration round. I think that if the idea is diamond… It depends on the situation that if you would yourself come up with awesome idea or something and you are certain that it works, but you can't convince others that it is worth trying out then of course it tears you inside if they start changing it.* (Interviewee 4)

In general, interviewees said that game ideas may vary according to the games that were designed, but they also expressed other interesting or preferred starting points apart from theme and mechanics, such as the particular emotional state of the player, a hook that keeps people playing, the goal of the game, the form of interaction, or the daydreams of the players, such as gaining wealth quickly and easily.

3.4.2 Game ideas in change

Game ideas are prone to be altered in one way or another during the design process. This was emphasized by virtually all of the interviewees. However, while drastic changes were seen as unwelcome by some interviewees. In these cases, some interviewees stated that, from a practical perspective, change was not seen as a welcome force.

> *Drastic changes are very bad. Game concepts that have good, strong foundations that have something that is*

> *relatively easy for everyone to understand and buy into, have best chance, and those are the ones that at a core don't really change.* (Interviewee 5)

Because of the nature of games as complicated experiential products, change was also seen as evitable. Others emphasized that the only thing that mattered was the quality of the end product. Some interviewees expressed that it was difficult to know whether an idea would work before the first playables were available, and in this sense the changing of an idea was sometimes expressed as a phenomenon that "should be accepted."

Interviewees also expressed that it was not good to go into development with rough ideas and then change those ideas during the process. Additionally, some interviewees indicated that ideas might be changed because of marketing issues, target groups' desires, or as one interviewee described, "in many cases, change is about translation, making it fit to a target device." Interestingly, the interview data had been gathered before the era of Facebook games, where games are touted as being in constant beta mode and are never completely finished. The concept of change seems to be tied to production realities and requirements rather than notions of creativity or innovation.

3.4.3 Good game ideas

Interviewees considered the generation of original ideas as relatively easy; however, generating good ideas was a bigger challenge, and the art of selecting the good ideas was not easy for interviewees to describe. Even though some of the interviewees were responsible for screening ideas, they struggled to describe the characteristics of a good idea or their own processes of selection. For some, there were simply no bad ideas, since the execution was the key to the quality of a game; for others, selection was only a matter of experience. According to these latter interviewees, one develops an "eye" for the good ideas over the years.

However, some interesting issues arose that were not related directly to the content of the idea, but rather to the reactions that a good idea could produce. Good ideas were seen as inspiring for others to immediately build on top of them. It was seen as beneficial when a description gave enough information for other to imagine the idea, but enough space for them to develop it further. The bouncing of ideas would expose that quality of an idea.

Analyzing ideas was also mentioned as a tool for selection. By looking at the potential components of a game, some interviewees reported that it could be predicted, at least to some extent, whether it would work. This analysis is especially possible in those cases where the idea is based on an existing genre or game type. With completely new game ideas, it was considered more difficult to make a decision based only on an abstract idea. It was also stated that developing ideas further made evaluation easier.

4. DISCUSSION

One of the most important factors for the creation of game ideas is the kinds of reactions those ideas produce in the designers themselves, their colleagues and in the people who actually select the ideas. A "good" idea may not be the one that is fully described from the beginning, but is more inspirational and open-ended in terms of allowing the whole production team to modify it. Even though initial ideas are produced mainly in solitude, it is important that the voices of others on the team are also heard, engendering a process of many ideas contributing to one idea that, despite inevitable changes, carries the game idea through the production process.

Ideas are generally seen as a starting point for potential game production, and are prone to change all through the production process. It is beneficial for the process to involve as little change as possible to the idea, but even dramatic changes can be made for the sake of the quality. Recent discussions of agile development methods supports the finding that an ambivalence toward approaches may reflect a lack of production models tailored to the iterative process of game development [15].

Even though other games may be sources of inspiration [13], this study shows that game professionals purposefully seek inspiration outside games, and the creative process of coming up with new game ideas is purposefully affected. Game designers and other game professionals seek their inspiration from different sources, using formal techniques or by approaching the issue from a more informal direction. The methods are typically a result of personal experiences rather than the product of formal education. The lack of proper understanding of brainstorming techniques is an ever-present issue as well.

Experiences with formal techniques for game idea generation vary among both game companies and game designers. For some, there are hardly any techniques, and the ideas that are produced are intuitive to them through their personal experiences. For others, formal techniques or group meetings provide a fertile and inspiring approach to produce interesting ideas.

Despite the fact that game design processes are organic by their nature, there is still much room for systematic approaches. Even though the initial idea for a game may change over time, the role of a good idea is still seen as an important component of the process of developing a new game. However, systematic approaches could also include processes of extending the initial game idea, and some techniques could provide tools for the designers to broaden their thinking. Such systematic approaches would be useful in the game productions that use existing IP brought from another media environment, such as movie-licensed games or innovation processes of quality sequels.

Some existing work towards systematizing the idea generation processes already exists. For example Tracy Fullerton [8] and Deborah Todd [25] has been writing about the game design processes including the idea generation approaches that are suitable for game designers. Fullerton for example has conducted various experiments of game play innovation techniques, such as idea cards or utilizing surrealistic games [5] for coming up with original, new ideas. Todd [25] divides techniques into blue-sky techniques and brainstorming, where the latter is mainly suitable for the development of existing ideas. This is very well in course with the experiences of Finnish game designers as well. The explication of best practices is also very important in building relevant curricula for future students of game design.

One of the takeaways of this study is that the use of formal techniques such as brainstorming may generate negative experiences unless suitable training is offered. Accordingly, it is suggested that processes should be developed and systematized further as such practices will yield a competitive advance to game design companies. However, it seems to be a rather heavy process

for many small game companies to use formal ideation techniques. Training and the change of practices both take up a lot of time, which is precious for the game production process itself. The emphasis should also be on the education of future game designers and the development of curricula at universities.

In the GameSpace project, which studied the methods for design and evaluation of casual mobile multiplayer games, we developed tools that would help the idea generation of casual, mobile, multi-player games. These techniques are taken even further in the sense that they would support certain game products. The user experiences of these tools has been discussed elsewhere [16, 17], but in general the toolset has gained positive feedback for its easy-to-use approach (some of the tools are fast and easy to learn card games). The results for the test period have indicated that these tools have been successful in providing game-related stimuli to group ideation sessions. It is possible, then, to develop tools that fit the needs of game designers and that are fast to implement and put into practice.

In developing these techniques, one must acknowledge the current practices of game professionals. Game ideas do not come from nowhere; the creation of new ideas is not a mystery, as it can be affected in many ways and the process can be nurtured or hindered. It is also not only about seeking inspiration from similar sources to games, or elsewhere, it is matter of creative thinking skills and techniques. Game designers and other professionals already know this through their past experience generating game ideas. Idea generation can be enhanced, ignited, structured, and guided using formal and informal techniques.

One important factor in the enhancement of creative processes of game designers and other professionals is the emphasis of individual work. Group processes may be highly beneficial for innovation, but at the same time they can be slow to facilitate and difficult to manage. Initial ideas are naturally born on the level of individuals. The talent and experiences of game designers could be taken even further by investigating such approaches and systematizing the common knowledge of brainstorming. It is also notable that these methods should be seen as tools for designers and not as the end solution. We still need to bring to bear the insight and experience of different creative individuals on the ideation process.

Lastly, one should recognize that game ideas seem to work as a starting point for the game creation, rather than as the foundation on which games are built. This could inspire new approaches to systematic idea generation tools based on the emotional responses of the idea generation process, rather than only focusing on techniques that target quantity and applicability of the initial ideas. It also creates another perspective to study the effects of techniques.

5. CONCLUSIONS

I have presented the findings of an interview study of game industry professionals conducted in Finland 2005 and 2007. The goal of the study was to understand the approaches for idea creation and the role of ideas in the production.

The results paint a picture of an organic practice with varying approaches for seeking inspiration and affecting the process. Inspiration is sought from many domains, including games, but also other fields and activities. The initial ideas are usually born in solitude, but seeking early feedback from colleagues is a regular part of the practice of developing game ideas.

Among game designers, the lack of specific education in terms of creative work is evident. Whether the process was not familiar to the interviewees themselves or the lack of understanding was present in other participants' attitudes towards sessions, experiences of inefficiency were often reported. Misunderstanding of systematic approaches towards idea generation and inadequate brainstorming skills distract from the potential of group idea sessions. However, the successful approaches developed by the professionals themselves also indicated the great potential for emergent, novel tools and methods that are especially suitable for game production.

6. FUTURE WORK

In order to understand the most common approaches to game idea generation, as well as the effects of nationality and other background factors, an international quantitative study is in process. The study also examines the recording and management systems of game ideas; how all ideas are stored and further used.

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