

Defining Game Jam

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ABSTRACT

In this paper, an analysis of game jam descriptions and definitions in academic papers is presented. A total of 20 papers from various publication venues from 2006 to 2014 are analyzed in terms of their conceptualizations of a “game jam”. The background of the papers and their contribution to game jam research are also critically examined. A further explication, “an advanced definition”, is proposed as a basis for future academic discussions and collaborations. The advanced definition sums up game jams as: accelerated, constrained and opportunistic game creation events with public exposure.

Categories and Subject Descriptors

K.8.0 [Personal Computing]: General – Games; H.5.2 [Information Interfaces and Presentation]: User Interfaces – Prototyping; D.2.1 [Requirements/Specifications]: Elicitation methods D.2.2 [Design Tools and Techniques].

General Terms

Design, Experimentation, Human Factors, Theory.

Keywords

Game jam, Global Game Jam, Definitions, Meta-analysis, Game development.

1. INTRODUCTION

The growth of the game jam scene has been exponential for the past thirteen years. Between the first Indie Game Jam¹ in 2002 and the The Global Game Jam² hitting 28 837 registered participants in 2015 [8], a vast number of different kinds of large and small, global and local game jams have been created, participated in, praised and acknowledged. Forerunners like Ludum Dare³, Nordic Game Jam⁴, The Toronto Game Jam (T.O.

Jam)⁵ as well as Global Game Jam and Indie Game Jam alike have been an active inspiration for a broad spectrum of different game jams.

Passionate organizers and participants all over the world have been able to take part in and witness all sorts of jam experiences. Game jams have been run in odd locations such as castles, planes⁶, busses⁷ and trams, or even on the 52-hour train journey of Train Jam⁸. They have been set in different timeframes, from the extreme challenge of 0h Game Jam⁹ to the laid-back VR Slow Jam¹⁰. Game jams have been built around varying creative stimuli: for instance Global Game Jam with themes of sentences, pictures, words or sounds and Molyjam¹¹ with a Twitter account of Peter Molydeux¹² (a reference to Peter Molyneux) as a starting point for the jam games. Game jams have also been utilized as internal creativity boosts for game companies, to the extent of making a game jam a combination of a Kickstarter campaign and a public show, such as Amnesia Fortnight by Double Fine. Game jams have been trying to overcome sensitive issues with specific design topics, such as The Boob Jam¹³ and they have been set for solving scientific problems like quantum dilemmas in Quantum Game Jam¹⁴ or for carrying societal agenda, such as in Fukushima Game Jam¹⁵. The jams have become a widely utilized learning method for game education and globally shared entry points for aspiring game developers as well as social mechanics of indie game developers. Many participants take part in several game jams during a year, and for some, being a part of the communities around jams like Nordic Game Jam, Exile Jam¹⁶, No More Sweden¹⁷ and their equivalents around the globe¹⁸ is part of their lifestyle. Being a source of intense experiences and a

⁵ <http://www.tojam.ca/home/default.asp>

⁶ <http://xiotex-studios.com/planeJam.html>

⁷ <http://globalgamejam.org/2014/jam-sites/fgj-bussi>

⁸ <http://trainjam.com/>

⁹ <http://0hgame.eu/>

¹⁰ <https://www.oculus.com/slowjam/>

¹¹ <http://www.molyjam.com/>

¹² <https://twitter.com/petermolydeux>

¹³ <http://theboobjam.com/>

¹⁴ <https://www.facebook.com/quantumgamejam>

¹⁵ <http://fgj.igda.jp/>

¹⁶ <http://exile.dk/>

¹⁷ <http://www.nomoresweden.com/>

¹⁸For instance this site is collecting different game jams in one calendar: <http://compohub.net/>

¹ <http://www.indiegamejam.com/>

² <http://globalgamejam.org/>

³ <http://ludumdare.com/compo/>

⁴ <http://nordicgamejam.org/>

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springboard for unconventional games (such as Surgeon Simulator¹⁹, Johan Sebastian Joust²⁰, Goat Simulator²¹, Dark Room Sex Game²² and B.U.T.T.O.N.²³ to name only a few), game jams have been attracting the attention of game media and gamers widely to the extent of attempting to utilize the format for a TV show [1]. The rich nature of the phenomenon and the wide promise of its benefits have secured the success of the format in the contemporary game culture and industry.

As an emerging phenomenon and a method in its infancy, game jams have gained relatively wide interest from the academic community of game researchers. As an evolving area of academic interest, game jams have been commented on, researched from different angles and used as a platform for varying studies [4, 5].

Framing game jams as “compressed development processes” [26] is probably one of the key reasons for the growing academic interest in the format. Being able to go through different steps of game development in a short period of time makes game jams an attractive platform for research into game development and design. Fowler, Khosmood and Arya [4] highlight such potential by naming Global Game Jam (GGJ) “a new kind of research platform” and further setting a promise of it providing “a unique opportunity for studying different professional, educational and cultural aspects of computer games”. Supporting the claim of potential, game jams have also been touted as “a design research method, situated in the research-through-design tradition” [3]. Particular research interests and utilization strategies vary. For instance Musil et al. [16] investigated game jams as a general format of prototyping to gain better understanding on prototyping practices in software development processes, while Scott and Ghinea [21] were interested in game jams as an opportunity for educating game makers on the issues of accessibility in games.

Many researchers utilize Global Game Jam as a platform for game jam studies. The size and reach of GGJ has provided unique opportunities in comparing the cultural differences of game development. Yamane [25] reported the introduction of Global Game Jam in Japan with a claim that “many Japanese jam attendees were not well-acquainted with the practice of the participatory design or prototyping well before the Global Game Jam”. It seems that game jams can act as a way to amplify teaching of certain design paradigms within game curricula. This has been further confirmed by Preston et al. [18], who found a positive correlation between game jam participation and formal academic performance in game education.

Global Game Jam has been advertised as a game development event focusing on creativity, experimentation and innovation [7], which has intrigued researchers and developers interested in game innovation to turn to GGJ and other game jam events. For example, Zook and Riedl [26] studied the Global Game Jam 2013 participants’ design inspirations and goals in order to add to the understanding of the relationships between design

processes and development outcomes. Ho, Tomitsch and Bednarz [10] investigated the connectivity of ideas and the inspiration network within Global Game Jam 2014. Contributing to the same field of inquiry, Kultima and Alha [12] used GGJ 2010 and GGJ 2011 as a platform for studying brainstorming methods for game development.

In 2006, Fullerton et al. [6] commented on how game jam participants’ “eager engagement” has been motivated by “the enthusiastic search for new ideas”, yet few proved successful in their endeavors. This realization further made them deem game jams as a tool for “small innovative ‘flashes’ that would need a secondary level of longer term research to foster and iterate on these flash ideas.” Whether or not game jams actually function as a tool for innovation, jams have found their relevance in connection to the game industry. In 2013, Turner, Thomas and Owen [24] described game jams as “an important rite of passage and baptism event for students looking to enter the industry [...]”, adding that “something very unique happens within a game jam and that this ‘something special’ is an important aspect of the potential future life of a vibrant games industry.” Reng Schoenau-Fog and Kofoed [19] also emphasize the role of game jams as social events. Studying the Nordic Game Jam 2013, they concluded that while the interest in developing the game itself plays a large role, it is mixed with an interest in socializing with other game developers and being part of the community.

Certain challenges arise for academic endeavors when researching such a volatile and widely spread phenomenon such as the game jam scene. The events can differ in terms of rules, context and setting, stimuli, guidance, time frame and goal. Game jamming is also a relatively new phenomenon, and we lack comprehensive understanding of the format and the differences between the events. Even though the phenomenon of game jams is in a state of flux, some degree of clarity in the concept would benefit future research collaborations. How much of our research in game jams is comparable? Which issues in game jams are essential for the achieved results? Which topics can be attributed to the format and which to the context or specific details?

In this paper, selected academic papers discussing game jams from different perspectives are examined in order to analyze what a ‘game jam’ is and how it could be conceptualized in research contexts.

2. DEFINING GAME JAM

On the webpage of Global Game Jam [7], the well- documented and popular game development event is described as “[...] the world’s largest game jam event (game creation) taking place around the world at physical locations.” Another widely acknowledged game development event, Ludum Dare, defines itself [13] similarly as: “[...] the *Accelerated Game Development Event* of the same name (also called a “Game Jam”)” and “It’s both the longest running, and the largest Online Game Jam in the world.”

Global Game Jam further manifests itself as non-competition: “The GGJ stimulates collaboration and is not a competition.” The Wikipedia article on Ludum Dare describes the event as “an accelerated video game development *competition* [emphasis added].” Both being weekend-long, 48-hour events, the main

¹⁹ <http://www.surgeonsim.com/>

²⁰ <http://www.jsjoust.com/>

²¹ <http://www.goat-simulator.com/>

²² <http://www.copenhagengamecollective.org/projects/dark-room-sex-game-2/>

²³ <http://brutallyunfairtactics.com/>

differences of these two events seem to be whether they are physical or online happenings and whether they promote competitive aspects or not. However, there are even more differences in the setting of game jams in a wider spectrum. Not all game jams are 48-hour events and they differ in terms of goals, participants, locations, rules and other factors in constructing the events.

Despite the differences and the flexibility of the concept of a game jam, there is a rising interest in the academic community to study game jams from different perspectives and with various agendas. There is already a handful of research on game jams, but how do these academic papers define the phenomenon? Do these descriptions vary? What is included and what is excluded from the phenomenon? How is the research framed?

Researching the rising phenomenon of jamming provides an opportunity to gain insight into the important aspects of the community of game making, but with such a rich phenomenon in flux, it is important to understand what has been actually researched and how generalizable these results are. In order to improve the framing of the phenomenon of game jams in academic contexts, research articles discussing the phenomenon were selected and analyzed.

2.1 Academic Papers on ‘Game Jam’

For the purpose of this study, academic papers discussing game jams were searched by using search engines such as Google Scholar, ACM Digital Library, DiGRA Digital Library and various other academic databases such as EBSCOhost, IEEE Electronic Library, or ScienceDirect. The main search term used was ‘game jam’. Further articles were reached by utilizing the articles’ reference lists.

Table 1. Research papers included in the analysis.

Authors	Pub. year	Game Jams in focus/data	Affiliated countries of the authors	Length of the paper (pages)
Fullerton et al.	2006	(not focusing on game jams)	USA	9
Musil et al.	2010	GGJ	Austria	4
Kultima & Alha	2011	GGJ	Finland	16
Preston et al.	2012	GGJ	USA	20
Shin et al.	2012	Health Games Challenge, Fukushima Game Jam	Japan	16
Chatham et al.	2013	(workshop proposal, general approach)	USA, Australia, France, The Netherlands	3

Fowler et al.	2013	GGJ	New Zealand, USA, Canada	5
Fowler et al.	2013	GGJ	New Zealand, USA, Canada, UK	7
Reng et al.	2013	Nordic Game Jam	Denmark	8
Scott & Ghinea	2013	GGJ	UK	4
Turner et al.	2013	The 48hr game making challenge	Australia	10
Yamane	2013	GGJ	Japan	4
Zook & Riedl	2013	GGJ	USA	5
Deen et al.	2014	(workshop proposal, general approach)	The Netherlands, Australia, New Zealand, France	4
Goddard et al.	2014	Ludum Dare, fab48hr, GGJ	Australia	10
Ho et al.	2014	GGJ	Australia	4
Moser et al.	2014	(workshop proposal, general approach)	Austria, Canada, Australia	4
Preston	2014	CDC Games for Health Game Jam	USA	5
Sampugnaro et al.	2014	GGJ	Italy	11
Toprak	2014	Several	Australia	4

Altogether 20 academic papers [2, 3, 4, 5, 6, 9, 10, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26] discussing game jams in one way or another were examined for this study²⁴ (see Table 1.

²⁴ All the retrievable research papers were included, with the exception of three papers: One workshop summary has been excluded since it was summarizing the workshop papers otherwise present in this analysis, one short paper was excluded since it did not provide any reference to a general description of a game jam and one paper [14] was behind a paywall out of the reach of the authors of this analysis. Otherwise all papers found were included, even though some papers were not presenting any research data or actual findings (some were only workshop proposals or possibly poster

below). The articles were analyzed with the help of the qualitative analysis tool Atlas.ti²⁵. Primarily the articles were coded when a full or partial description or a definition of a game jam was proposed, resulting in 128 quotes. The quotes were then further grouped in order to form a larger view on the attributes connected to the conceptualization of a ‘game jam’. In addition to this, the authors’ affiliations, topics of the articles, publication venue, publication year and researched jams, data sets and keywords were also coded in order to provide contextual information on the studies.

Most of the articles were very recent: 15 papers were published in 2013 or 2014, whereas only five papers were published in 2012 or earlier. The earliest paper found was published in 2006 and only briefly discussed game jams in connection to other topics, whereas the later papers were more focused on the game jams themselves.

Over half of the papers were using data collected from Global Game Jam (GGJ) or discussing their topic in reference to GGJ. The other jams that were centrally discussed or where the data was collected from were: Nordic Game Jam²⁶, Fukushima Game Jam²⁷, Health Game Challenge, CDC Games for Health Game Jam, Ludum Dare²⁸, fab48hr, and The 48hr Game Making Challenge. The nationality of the authors were correspondingly varying. The authors’ affiliations were based in: Australia, Austria, Canada, Denmark, Finland, France, Italy, Japan, the Netherlands, New Zealand, Sweden, UK, and USA.

The quality of the research and the depth of the examination varied: Only eight articles were full papers of eight or more pages, and the rest of the papers were extended abstracts or papers shorter than six pages. Most of the articles were presenting a tentative analysis of their studies and were working papers or workshop proposals. There were a couple of main publication platforms and contexts which these papers were connected to: several papers of the group were published as part of the proceedings of ACM-affiliated conferences, of which many were from CHI-conferences (5) or from the Foundations of Digital Play-conference (5). Only two papers were published in journals²⁹.

The focus of the articles varied: some papers discussed the concept, evolution and the potential of game jams, some were describing game jams as a tool to study creativity, ideas or innovation; a few papers only briefly introduced or superficially discussed the topic of game jams. The most used keywords were: Game jam(s) (8), Game design (8), Game development (6), Prototyping (3), Community (3), Global Game Jam (4), and Design (3). Two papers did not have any keywords explicated.

abstracts). If the papers included conceptualizations of a ‘game jam’ and were presented or published in an academic conference or a journal, they were included in the analysis.

²⁵ <http://atlasti.com/>

²⁶ <http://nordicgamejam.org/>

²⁷ <http://fgj.igda.jp/>

²⁸ <http://ludumdare.com/comp/>

²⁹ Published in International Journal of Game-Based Learning and GAME The Italian Journal of Game Studies

2.2 The Descriptions and Definitions

Very few papers focused on game jam definitions or featured an elaborated description of the format. The defining attributes were usually scattered around the papers and some papers concentrated on describing the specific game jam they were researching instead of a general account. Some articles were recycling the descriptions from previous articles and publications (such as the 2010 paper by Musil et al. [16] and guidebook by Kaitila [11]) or the official description at the Global Game Jam webpage [7].

Even though some shared attributes and rules, popular comparison points and reference events are starting to saturate within the research papers, the descriptions might vary in terms of emphasis, focus and specific features marked as essential or important for a ‘game jam’.

2.2.1 Game jam is...

Most of the papers presented a short summary or description of a game jam in the introductory paragraph of the research paper. Some articles were trying to conceptualize game jams on a more general level [2, 3, 4, 5, 16, 24, 25], some papers started with a description of Global Game Jam instead.

Game jams were discussed widely in the papers as game development *events* [3, 4, 5, 6, 9, 10, 18, 20] or *gatherings* [4, 5, 20]. The expressed target group of the events varied from aspiring developers to professionals [18] as well as indie game developers and hobbyists [24]. In some descriptions, it was specifically expressed that a participant, or a ‘jammer’ [3, 4, 5, 20, 25] can be “anyone who can contribute to the development of the game” [4, 5]. Low barrier of entry was discussed as an important part of the jams. Some authors explicitly stated that participants might be underestimating their prospective contribution only to be later emancipated by their positive jam experiences.

Following the time constraint of Global Game Jam and Ludum Dare, many jams are formed around the 48h-model of a game jam. In the research papers, the time constraint was usually mentioned, but for some the scale was explicitly set, for instance to 24-48 hours [9] or 8-48 hours [23], while some just generally pointed out the jam being constrained by a “very short time” [12, 3]. Some described game jams as “accelerated game development” [24] or expressed the intensity of the event by describing it as a “marathon” [20] or otherwise intense or energized happening [2, 19, 24].

The role of motivational factors was a popular topic in the game jam research papers [9, 18, 19, 20]. As a defining factor, some were framing game jams as competitions or non-competitions. Many of the papers were discussing whether a game jam event is supposed to be hosting an element of competition at all [4, 5, 10, 18, 19, 20, 26]. Whether a game jam was framed as a competition or non-competition, there were also mentions on the nature of game jams offering “a safe space for experimentation” [21] and participants being motivated by “(safe) risk” [18] along other motivational factors. In some papers game jams were specifically appointed as platforms for promoting the culture of embracing failure [9, 18].

Even though solo game jams exist, teamwork [24] or social aspects are often mentioned as a central feature of the game jam

scene. Usually a game jam is also celebrated as a place for people of multiple skillsets and backgrounds [3, 4, 5, 15] coming together and collaborating [2, 16]. The community is also seen as essential: game jams gather similar-minded people with a shared passion [19, 20, 24], and jams can also work as fruitful platforms for networking [24] outside daily communities [16].

In the analyzed papers, game jams were oftentimes seen as tools or methods for different agendas, for instance as a tool for innovation, creativity, novel game ideas, exploration of new ideas [2, 4, 5, 16, 18], and especially learning [4, 5, 18, 21, 25] for different kinds of subject matters and skills.

There are some different framings too. Goddard, Byrne and Mueller [9] frame game jams as *games*, or more precisely as *ludic craft*, whereas Preston et al. [18] described game jam participants as *players* and furthermore used player research as a frame of theoretical reference in order to understand game jam participants.

Furthermore, Musil et al. framed game jams as *design games*: “Due to its rules, a game jam can also be understood as a type of a design game with the difference that every team “plays” its own version of the game depending on the used platform, tools and modeled interaction aesthetics.” [16]

Based on the research papers, game jams seem to be attributed with various features. Game jams can have different agendas and they might be set with varying time restrictions and design constraints. Some participants might be motivated through the element of competition, whilst for others this is important to exclude. Other motivational factors can be tied to social experiences, learning and being playful. There is no single consensus explicated on defining and describing game jams and this is also due to the creative nature of the events.

While some of the research papers induct the defining attributes from their data, it is usually unclear how much of the attributed features could be verified as elemental. It is common that the authors of game jam research papers are also game jam organizers and this role might lead to overemphasizing features unimportant to the participants or goals not necessarily reached. Deeper and more thorough research on the elements of a game jam is needed. The selection of the jams researched in the papers is also limited. Differences in the style of organizing and participation can vary a lot. More extensive descriptive studies are also essential for the future research of game jams.

2.2.1.1 References, parallels and comparisons

In order to better communicate the concept of a game jam, the event was sometimes placed in parallel or compared with similar happenings or methods. Popularly in the examined group of academic papers, game jams were often described as rapid prototyping or events for rapid prototyping [2, 9, 15, 16, 22, 25]. A very popular comparison event were hackathons [4, 5, 20, 21], but more specific parallels were also discussed, such as DesignFest and CodeFest [22] or Spark Summit [16].

Depending on the point of view, game jams were also depicted as communities of interests [19], collective ritual & social experiments [20], similar to music jamming [4, 5] or even as a music festival and frequent holiday destination [24].

Comparing game jams to their related phenomena and drawing from the research already conducted in other fields could shed light on interesting factors in facilitating game jamming and provide versatile approaches to the deeper research of the phenomenon of game jams.

2.2.1.2 Game jam rules

Even though it might be important for many game jam participants and organizers alike that a game jam is as non-regulative as possible, for instance in order to promote the culture of embracing failure [18], a set of rules for the event was also discussed, perhaps to bring more clarity to the format and communicate game jams better in academic contexts.

For instance in 2010, Musil et al. [16] listed seven “key rules that [typically] outline the general event dynamics”. These include 1) rapid prototyping, 2) thematic constraint, 3) anyone can participate (if one can contribute), 4) time constraint of 24-48 hours, 5) ad-hoc teams and small team sizes, 6) software and hardware agnosticism, and 7) public presentation and judging at the end of the event. [16].

Couple of years later, Fowler et al. listed a similar, yet a bit different and somewhat softer set of “common elements” for game jams: 1) goal of small and experimental games within a limited timeframe, 2) previously unknown theme, 3) anyone can participate (if one can contribute), 4) no team formation before the event and limited size of teams, 5) hardware and software agnosticism, 6) (sometimes) public presentation and judging at the end of the event. [4, 5]

Also a set of rules for the organizers has been proposed for instance by Goddard, Byrne & Mueller [9], comprising options for the organizers to design a game jam event as a *playful* or *gameful* context for the participants.

It is not completely clear how well the listed rules are actually communicated to the participants or the sub-organizers – if at all. The lists of rules presented in the papers are not drawn from well-defined data, but instead from the limited experiences of the authors as organizers and participants. Researching the role of the rules for game jams could be one of the important issues in uncovering the nuances in the format. What is the difference between the normative descriptions of a game jam and an actual instance of a game jam? According to which implicit or explicit rules the participants of the game jams actually act upon?

2.2.1.3 Categories of game jams

Goddard, Byrne and Mueller [9] also created categories for different types of game jams based on the targeted participants and social contexts of the events. These include 1) Indie game jams, 2) Industry game jams and 3) Academic game jams. The division is interesting, and despite the overlapping in and vagueness of this particular categorization, similar classifications could be facilitating the future academic work in analyzing the phenomena within several subsets and contexts.

One future research direction on game jams could concentrate on how to fruitfully categorize different types of jamming events. What are the distinctive features contributing in essentially different game jams? Could we divide the events in terms of their duration, source and type of constraints, social context, rules, targeted participants, hosting organizations, and goals of

the events or some other factors? Such categorizations could also help in communicating the differences in the settings of a game jam to the potential participants.

All and all, based on the papers in this analysis; game jams are rich contexts for different forms of activity and they are framed in various ways by researchers. Some descriptions were tied to the potential of the game jams and some were refining their understanding of the phenomenon reflected by the data they had gathered. However, many questions are yet unanswered and the quality of the approaches vary.

Further explication of the format seems to be called for if we are to conduct rigorous studies on game jams and wish to facilitate collaboration between different authors and improve the comparability of research results in future game jam studies.

3. ADVANCED DEFINITION

The analysis of the academic research papers written so far gives an interesting starting point for formulating an academic definition for the format of a ‘game jam’. It seems that even though some features might not be shared either through existing academic descriptions, participant or organizer experiences or explicated values and identified potential, some central features might dominate the discussions and preconceptions of the events. Additionally, there seem to be some overlooked features which deserve more attention.

Constructing an exhaustive definition is not easy, and to some agendas not even fruitful. The practice of defining and explicating research concepts are, however, pivotal for academic work. The process of conceptual analysis sheds a light on the borders of the concept and the differences in usage. A pursuit in defining an emerging concept also participates in conceptualizing neighboring phenomena.

Interestingly a loose definition of a game jam such as “*a game development event focusing on a given design constraint with relatively short timeframe*” seems to depict most of the contemporary game development processes. In the current game development scene dominated by the mobile game industries, game making involves production times usually shorter than a decade ago. It is also typical that a game production fashions design constraints driven by technology, target groups, existing IP or a platform. Then again, a more specific definition [cf. 16] could leave out many socially negotiated cases of a ‘game jam’. For instance explicating the timeframe durations within the context of a game jam might exclude some game jams in an artificial way. Also the participating groups of the events may create different jam experiences, while the format can still stay the same. The variations in utilization of the format and the preferred outcomes, or collaborative aspects of the events create difficult borders for the concept. Some game jams are targeting towards innovation, but many are indifferent to this aspect. Some events are engineered for social networking, whilst others rely on the participants doing solo work or collaborating with their friends.

All in all, finding a definition does not necessarily change the way game jams are set or experienced. However, an advanced explication might lead to fruitful directions for future research. An attempt to define and explicate the key elements in the concept of a game jam could help us in communicating the

research findings and in researching the differences between the normative perceptions of a game jam and the actual instances of different events.

Combining the views of the analyzed literature and drawing from personal experiences in several game jams³⁰, an advanced definition for a ‘game jam’ is:

A game jam is an accelerated opportunistic game creation event where a game is created in a relatively short timeframe exploring given design constraint(s) and end results are shared publically.

The definition fashions central points which are further elaborated and discussed below.

3.1 Game creation event

Game jams were originally connected to the game industry from an indie perspective (Indie Game Jam) and later also utilized as an in-house method for game studios (for instance by Double Fine). Furthermore, game jams are also widely adopted as part of game education [e.g. 18, 22, 25] and as a good starting point for aspiring game developers [e.g. 19, 24]. The phenomenon is strongly part of ‘game development’ as a term referring to commercial game productions. But perhaps during the upcoming years, game jam events can be considered as events for heterogeneous audiences and open for all types of contributions. Game jams can work as fruitful platforms for fostering game making as a hobby and a culture. Along this development, the reference to industry could be toned down by calling a game jam a *game creation* event instead of a game development event – be it an online *event*, a physical *gathering* or another form of temporary occasion.

In a game jam, the games are *created* on the spot and often from scratch. However, it seems that sometimes participants might come with an existing idea to explore, or that the jam is organized around premade ideas (like Molyjam or Amnesia Fortnight, for instance).

It is relevant to study closely how the creation processes differ from one game jam to another: Is the ideation part of the game jam or not and does this affect the end results? How much are existing sources actually used and what kind of tools are better suited for the jamming events?

Also an important, yet perhaps somewhat overlooked part of the research in game jams are the instructions and the (implicit or explicit) rules of the jams and their effect to the overall experiences and results. How are different game jams framed as *events*?

3.2 Accelerated and constrained

Time is widely acknowledged as a part of the concept of a game jam [e.g. 2, 3, 9, 12, 19, 20, 23, 24]. The pressure of a strict deadline can create an additional motivation for cutting corners and “just doing it”. However, it appears that the challenge of

³⁰ The author of this paper has extensive experience in organizing and coordinating different game jams in Finland, and she has been an active member of the Global Game Jam community since 2010. She has also taken part in numerous game jams as a game designer or a graphic designer in Finland and in other countries.

time is constructed *in relation* to the other game making experiences: be they commercial, student, or hobby projects. A game jam development process is usually shorter in duration, thus in a game jam *a game is created in a relatively short timeframe*.

Design constraints (such as themes, technological constraints, design features, genres etc.) also have a similar role in a game jam. Instead of using resources for extensive inspiration hunting, a game jam event usually provides preset starting points for the participants to cut short and to go directly to the concrete. A shared theme or technological constraint can also contribute to the jamming experience as a social event, but some game jams utilize a pool of themes or parallel constraints. Game jams can also start with inspiring tech talks or design presentations creating various potential hooks for the jammers.

The strong presence of constraints in one form or another frames the event as an *accelerated* activity through limitations such as time and other constraints. Constraints speed up the development process by cutting parts of the selection and decision making procedures. A game jam is *accelerated* through the constraints, be they externally set for the participants or internally set by the participants.

A very typical time frame for a game jam is 48 hours, but many jams differ by design (for instance 0h Game Jam and Amnesia Fortnight). Game jams also oftentimes build their brand around the given theme or design constraints (for instance The Boob Jam and Molyjam). The differences in the ways the game jams are accelerated provides interesting comparisons for researching game jam settings. In which ways very short game jams differ from the extended jams? What are the most appropriate ways to accelerate a game jam event if the goal of the jam is innovation or game education? How much do participants actually follow the constraints? What factors make the participants skip the constraints? How do participants create their own constraints?

3.3 Opportunistic

Outcome is important for the jammers. For some, the most exciting feature in a game jam lies in its potential for creativity and innovation, whereas for some, the most important part of the process is learning or socializing. The shared excitement might be tied to the experiential factors of game jams with unique opportunities for positive outcomes. However, the preferred rewards might vary a lot among the participants. The return might come in the form of prizes and awards, networking and social gratification, new skills and expanded understanding of the craft, or just simply in the form of a portfolio item – the game itself. Participants might be taking the weekend long jam in the hopes of any of these, or expect one of them and be positively surprised by another outcome. Success stories of games such as Surgeon Simulator or someone landing in a dream job might boost these expectations. Nevertheless, game jams seem to be rich opportunities for the jammers. A game jam can be conceptualized as an *opportunistic* event where the takeaway can be in different forms for different participants.

As already stated, the motivational factors of the jams were a popular topic in the game jam research papers [9, 18, 19, 20]. However, there should be more comparisons on how different game jams might diverge in this. We could also try to explore how the design of a game jam supports different opportunities for

the positive outcomes and whether some elements in the organizing might hinder others.

3.4 Publically shared end results

As an important part of the Global Game Jam and Ludum Dare experiences (among other game jams), the games are published on the websites of the events at the end of the jam. This feature is widely adopted, yet it seems to be overlooked by the research papers.

For instance, Fowler et al. [4, 5] list “a finale presentation where the best games will be selected” as one of the elements of GGJ, but then further emphasize the role of competition (GGJ is not a competition) instead of exposure. They do not list the webpage submission and the publishing of the jam game as one of the common elements of game jams.

However, sharing does not always mean open innovation or open source approach, like in GGJ. There are different possibilities for exposing the jam creation for the audiences outside your team. In some game jams, the only exposure is the end presentations. Sometimes the games can be directly commercialized, for instance by pushing a small game to application stores right after the jam. The games can be also gathered and published later on a website, like in the case of Train Jam in 2013. In some events, the jam experience is recorded or streamed on the spot, like in Amnesia Fortnight. The exposure can also happen later in the form of “play parties”³¹.

Sharing the end result despite the quality or innovation level is part of the many game jam experiences. The exposure to the outside audiences can create pressure similar to time and design constraints to the jam process.

In the end, the sharing and exposing the end results with other participants or the outside world can be in a greater role than perhaps researched so far. It could be vital for creativity (learning to not be afraid of failing), social aspects (being able to share and tell stories), reflection (learning from others) and recognition (in terms of external awards). In what way are *publically shared end results* part of the design of a successful game jam?

4. DISCUSSION

As an emerging scene, game jams are moving targets for research. One important part of the phenomenon are the changing platforms for the experiences: The constraints change, the time frame might be different, jams attract new participants and some jams are run in odd locations and with fresh agendas. Forming a definition of an emerging phenomenon is not unproblematic. Basing the definition on the insights of the early research is further contributing to the challenge of this definition game.

One particular problem with this pursuit is the problem of scope. The examined articles are heavily biased in documenting and analyzing only the partial sphere of the game jam scene: they are addressing either Global Game Jam directly or game jams that are inspired by Global Game Jam. Even though we can assume that the forerunners of game jams set some keystones for the scene, the jam culture is volatile and diverse, as already discussed in the introduction of this paper. The bias and the lack

³¹ Some GGJ locations host “play parties” after the jam, inviting people to play the games that were created during the weekend.

of extensive data are visible in some of the definitions and descriptions as well as in the outcomes and conclusions of the papers discussed here.

For instance, Musil et al. [16] were exploring the concept of game jam on micro and macro levels and their analysis is labelled as “critical observation of the game jam concept”. Even though they raise several interesting points and interpretations, the problem of the study is the lack of empirical data or the transparency of it. Their study, like many others in the group of examined papers, is mainly based on or drawing from the authors’ personal experiences on game jams as participants and organizers. This criticism partially affects also this paper. Despite the global nature of Global Game Jam, for instance, the jam cultures can be locally evolving to different directions and the researchers with even extensive experience on running and participating in game jams might have a very limited view on the different cultures under the game jam umbrella.

However, such accounts are also valuable in the early phase of research. In order to improve the joint efforts in understanding the phenomenon, we need to explicate our experiences and relation to the examined phenomena so that the rest of the academic community can evaluate the borders of the analysis or reflections.

Furthermore, we do need more empirical, theoretical and experimental research on the topic of game jams from various different perspectives. This includes conceptualizations of the format similar to the one presented in this paper. The proposed definition can be considered as a hypothesis for the concept of a game jam which can be contested by both empirical and theoretical studies.

Explicating the key elements of a game jam can lead to further research questions and directions, as already suggested in this paper, and it can also help us create more comparable research and fruitful collaborations.

Studying the game jam scene as a standalone phenomenon is seminal for game design research. The jams have become an important stepping stone for future game makers and it will affect the ways that games are created in the future. Game jams also provide an interesting platform for other research pursuits: the format is flexible and controllable, yet natural. Game jams can work as a base for different kinds of experimental studies investigating various issues in game development and design.

5. CONCLUSION

In this paper, the concept of a game jam has been discussed. An analysis of 20 research papers from 2006 to 2014 discussing game jams has been presented and an advanced definition has been proposed. The proposed definition includes key elements of a game jam as follows:

A game jam is an accelerated opportunistic game creation event where a game is created in a relatively short timeframe exploring given design constraint(s) and end results are shared publically.

The conceptualization presented in this paper can be considered as a hypothesis for the concept of a game jam which can be contested by both empirical and theoretical studies. Furthermore, the conceptualization proposes new directions for future research and can improve the comparability of the research conducted.

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