

# The Game Jam Movement: Disruption, Performance and Artwork

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## ABSTRACT

This paper explores the current conventions and intentions of the game jam - contemporary events that encourage the rapid, collaborative creation of game design prototypes. Game jams are often renowned for their capacity to encourage creativity and the development of alternative, innovative game designs. However, there is a growing necessity for game jams to continue to challenge traditional development practices through evolving new formats and perspectives to maintain the game jam as a disruptive, refreshing aspect of game development culture. As in other creative jam style events, a game jam is not only a process but also, an outcome. Through a discussion of the literature this paper establishes a theoretical basis with which to analyse game jams as disruptive, performative processes that result in original creative artefacts. In support of this, case study analysis of Development Cultures: a series of workshops that centred on innovation and new forms of practice through play, chance, and experimentation, is presented. The findings indicate that game jams can be considered as processes that inspire creativity within a community and that the resulting performances can be considered as a form of creative artefact, thus parallels can be drawn between game jams and performative and interactive art.

## Categories and Subject Descriptors

K.8 [Personal Computing]: Games; J.5 [Arts and Humanities]: Media arts, performing arts; K.4.3 [Organizational Impacts]: Computer-supported collaborative work.

## General Terms

Design, experimentation, performance.

## Keywords

Collaboration, disruption, game jams, improvisation, innovation, Happening, Kaprow, participation, and performance.

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Proceedings of the 10th International Conference on the Foundations of Digital Games (FDG 2015), June 22-25, 2015, Pacific Grove, CA, USA. ISBN 978-0-9913982-5-6. Copyright held by the author(s).

## 1. INTRODUCTION

Game jams are recognised as unique social events in which groups of like-minded creatives from 'game-making' disciplines collaborate and improvise together within predefined time constraints [15]. The purpose of this exercise is to encourage creative experimentation and to develop rapid prototypes of game designs in 'a culture of sharing ideas, play testing and collaboration in an immediate setting' [36]. Game jams are distinguished by the mimesis of studio practices visible in contemporary game development, an area where a 'rich trans-disciplinary mix of the fields of art, narrative, programming and design' can be found [44].

As the literature on game jams has expanded, the discussion has shifted from one of definitions to one of epistemology. This paper aims to expand the discussion on game jams by considering what a game jam means to facilitators, participants, and communities. Game jams have been extensively studied in relation to the benefits to the development community [37,41], learning possibilities [33,40] and their construction [15,36]. However, while plenty has been written about the process of the design and development of jam events, there is a dearth of material which investigates their presentation as artefacts that disrupt thinking and methods of practice.

Game jams are a relatively new phenomenon, and the roots of the term can be traced back to 2002 [41]. Seminal annual events such as The Nordic Game Jam [34] and Global Game Jam (GGJ) [13] have developed increasing cultural recognition with the latter event achieving an estimated global in-person participation of 21,000 people [13]. Despite the growth in game jam events, these are not always recorded or documented, however, aggregate websites such as IndieGameJams.com [22] are making it easier to track jams and the variety of thematic and practice led approaches available. It is clear that there is no lack of diversity in game jam themes, from FEMICOM, inspired by 1990's CD-ROM point-and-click adventures for girls by Theresa Duncan [11]; to more whimsical jam themes such as The Universal Conquest Bagel Jam [12] where participants are tasked to '...create a game that has bagels in it.' Games jams which lead with a unique practice led approach seem comparatively rarer. One example, MUDJAM [23] tasks participants to create something MUD-related (MUD being a multiplayer text based game). This text-based only approach is very different to most jams and the restrictions provided by the MUD format act as a major constraint on the conceptualisation and game-making processes prevalent in jams today.

The widespread popularity of game jam events can be attributed to a number of factors. Firstly, the multidisciplinary nature of the activity is inclusive of other creative fields such as design, art, code, technology, audio [33]. Secondly, the collaborative nature is of interest to several fields including business, research and education [5,41]. Finally, the community building nature of events is welcoming to heterogeneous groups of people encompassing professionals, academics and hobbyists [37,30]. Regardless of the particular reasons for the proliferation of game jams, it is clear is that they are deemed to be of considerable value by the academic community, given the volume of literature on game jams that has emerged in recent years. Alternatively, it can be claimed that game jams instead employ an insular structure more in line with Kaprow's Happenings - where the audience creates and shapes the artwork through participation [24], with intrinsic artistic value emerging from situation and a performance [39]. Current literature does not seem to consider the artistic merit of game jams in a performative frame, which when considered as an artefact itself, can be seen to share qualities with temporal participative artworks such as Kaprow's Happenings and from which unique processes and innovations are able to emerge.

## 2. PROCESS AND OUTPUT

As previously defined, a game jam is a time-constrained creative event in which a community of multidisciplinary participants collaborate and improvise to create game prototypes, often experimental, in response to a theme. However, game jams can move beyond the notion of a creative response and can instead analyse, disrupt and evolve the themes and motives on which they are conceived. Exile is an excellent example of a jam which has pushed convention aside by fusing traditional game-making practice with outdoor activities, socialising and mini-challenges for a 'more relaxed type of experience when compared to other events such as Nordic game Jam or Global Game Jam' [21]. This is an important point of comparison as the standard time-constraints on game jams as mentioned before, may provide more intense atmosphere, especially in game jams which are openly competitive. To take such a 'chilled out' approach to a game jam is an example of disruptive practice.

Game jams are not exclusive to the games development industry from which they were birthed. Rather increasingly, game jam events are finding traction with non-professionals (students, academics and hobbyists) who enter for the experience and the exposure to process [44]. Just as much as game jams can be experienced as a platform for creation, they can be a platform which promotes ideas for learning, accessibility and diversity [7,8,37,40]. As a result, there are no prescribed formal frameworks for the processes of a game jam, instead they are best described as a mix of design and development strategies [33]. Goddard et al [15] distinguish three game jam types: Indie Game Jams, Industry Game Jams and Academic Game Jams. All forms are similar and the differences are driven almost entirely by context. What is commonplace among jam types is that the primary goal is for participants to collaborate for the purposes of rapidly creating a prototype. Musil et al [33] describe the game jam concept as 'sketching interactive software prototypes within the least possible amount of time'. The application of temporal constraints, or 'timeboxing' [15] is standard process in many jams and is typically limited to a set number of hours (12, 24 and 48 being the most common). It may be assumed that a major factor such as time constraints will have an impact on both the scope and quality of the prototype developed. As a primary output the

prototype exists as the artefact at the centre of a team's activities and negotiations. Prototyping is a central element of game development, but in the context of jams, there is a shift towards prototyping in rapid succession through short frequent iterations to evolve or refine gameplay mechanics and related audio-visual assets. Manker and Arvola [31] suggest that one the core functions of a game design prototype is to act as a shared representation to support communication and collaborative work, this argument evolves the understanding of a prototype beyond just a physical result of labour, but one of teamwork too.

As games are 'increasingly being applied in contexts beyond entertainment' [40] game jams too are exhibiting functions and ideas that differ from commercially driven game prototyping. Game jams are blooming into a platform which disrupts, becoming 'corrective to game creation as it is normally practiced' [38]. In this way, game jams can provide a platform for facilitators and practitioners to look inwards and challenge central ideals of the jam itself, including the aims and objectives of the event, the practices and processes it promotes and the participative space it inhabits.

## 3. PARTICIPANTS, PLACES, AND SPACES

Dourish [9] distinguishes between space and place, arguing that these respectively are the physical and social constraints placed upon an environment. This aids discussion of the myriad of activities which take place within a game jam highlighting a need to consider both the effect of physical spatial arrangements on the jam and its participants and the impact of social denotations of 'place' upon participant interaction and the community. Game jam events, which could be considered as 'informal collaborations' [17] need to facilitate spaces for working, sharing and interacting which support informal and opportunistic collaboration in distributed groups (or teams).

Game jams are inherently game design centric collaborations, therefore "playfulness and gamefulness" [15] are desirable qualities in the spaces for which jams may take place. Drake [10] develops the idea that place is inherently influential, noting that the creative fields of art, design and music source ideas from place remarking how spatial theory supports the idea that particular places promote creativity. Drake also argues that 'clusters' of creative enterprises will generate a 'creative atmosphere' in the spaces they exist and practice, building on the importance of the notion of places as influential, sources of ideas [10]. Ludum Dare, for example, is a self-described online game jam, founded in 2002 [27]. As one of the oldest and largest game jams, the online nature of the jam immediately challenges the notion of events that depend on physical spaces and places to facilitate community, social interaction and collaboration. Whilst the fundamental nature of the activity is changed, Ludum Dare participants use a range of existing online methods of communication and sharing to help collaborate on and orchestrate the event. These methods include an IRC channel to provide access to professional help, social media hashtags for keeping informed of other participants and live-streaming for public viewing of the development process [28]. A typical game jam is an organised event with opportunities for the participants to self-form into democratic communities of practice. This is promoted by organisers of the GGJ, who make their collaborative community intention very clear within their FAQ where they advise "Do not come to the Jam with a team. Everyone will have some time to think and pitch an idea. Collaborate with new friends or peers you admire" [14]. To

enable the formation of democratic communities Heath [18] highlights the importance of facilitating community focussed creative practices that generate new ideas, are grounded in diversity, encourage critique and support power sharing and decision making. These core ideals align with the general ethos of game jams and could be utilised by facilitators to organise democratic jams that prove enjoyable to all participants [6].

#### **4. JAMS AS IMPROVISED PERFORMANCES**

Improvisation is a core factor in a game jam because of unpredictable variables and resources that are available. A clue to the nature of the improvisational essence of a game jam resides in the origins of the moniker. The colloquial term 'game jam' borrows from its musical counterpart 'jam session' and uses of the term 'jam' or 'hack' in the contemporary creative sectors are certainly not new [3]. Carlsson et al [6] confirm that "approaches such as these have been used in the IT sector over the past decades..." The term jam is also applied informally to describe the process of collaborative engagement between people over a defined time (or session). This is not a technical definition and it remains flexible to suit the scenarios under which it is implemented - 'Jam session', 'Def-Jam', 'Game Hack', and of course, of particular interest to this paper, 'Game Jam'.

The expression 'jam' is derived from musical contexts, where a group of musicians playing different instruments are normally expected to collaborate for creative purposes. There are no expectations in terms of behaviours within or outputs from these events. However, there are some necessary structural norms such as how the performance groups and participants are configured, the order of performance, and the arrangement of instruments. Additional factors that will affect the jam and shape its outcome include "physical space, kinds of communication between participants, and musicians' musical skills" [35].

Creative improvisation can also be found in other fields, in the 1950's Beckett used improvisation in theatre to help enhance performance [16]. Also, influential studio 'The Factory' owned by Pop Artist Andy Warhol provided space in which creatives from a multitude of disciplines could meet for art-making and performance. Warhol recognised "the significance of the social spaces in which these industries and creative people interacted", harmonising cultural production with the social context.

Game jams have typically been conservative and limited in terms of the variety of social interactions that they provide, and could perhaps look to be more provocative. The challenging of established social conventions is a core part of artistic movements, and this may provide context in which the potential of a game jam as an artwork can be explored.

#### **5. PARTICIPATION AND SOCIAL INTERACTION AS ARTWORK**

Kester [25] proposes that conditions and situations of objects should be disregarded and instead a focus should be shifted to artistic modes where "aesthetic experience can challenge conventional perceptions...and systems of knowledge." His proposition relates directly to the concept of the artist as "context provider" who creates artworks which are the design of spaces or processes to orchestrate situations within which aesthetic experience can occur for participants.

The concept of social interaction and participation as a work of art is not new. The roots of participative or process driven art can be traced to the Dada movement, a tradition which is extended through the practices of Black Mountain College, Fluxus, Action Art and Relational Aesthetics [2,3]. Dada focussed upon artistic process and aimed to replace traditional values in art with a new form of art, motivated by political unrest and societal conformation [29]. Artists such as Duchamp disrupted conventional practices of the artist in his Readymades where he removed the creator from production of art and instead embracing chance in the creation of artwork [32]. Duchamp's declaration of a found object as a work of art forces the viewer to reconsider the meaning of the object within an artistic context, forming "new thought[s]" about the object as an artwork [42]. Everyday objects were used by artists to challenge concepts of 'the artistic' and in turn the boundary between art and everyday life [26]. Brecht the founder of Fluxus, extended this concept, inviting the audience or curator to participate in the reconfiguration of his "arrangements" and in time, to move away from creating the work himself into instead publishing instructions for the audience to create the artwork themselves [26].

Kaprow's Happenings invited the viewer to be an active participant within the creation and shaping of the artwork [24] where the "production and reception aesthetics coincide, and the work is conceived as an event experienced jointly by the artist and the audience" [26]. Kaprow believed that happenings are "designed for a brief life, they can never be overexposed; they are dead, quite literally every time they happen" [24]. The Happening takes place only once, without rehearsal and "all that may be left is the value to oneself" as the nature of a Happening means that there is no audience to witness the performance; instead the 'audience' actively creates the artwork [24,39].

For the proposition of a game jam as an artwork, there is clearly a blurring between 'everyday' practices of commercial industry practice and the events over the course of a game jam. However, Kwasek [26] believes "It is perceived as a provocative violation of the boundary between art and everyday life only when it empathically challenges conventional standards of behaviour or acknowledged systems of reference." Therefore, it may be necessary to evaluate the potential for game jams to challenge such standards in order to be recognised as artworks in this context.

Game jams demonstrate an inherent complexity in terms of identifying and understanding the boundaries between artist, author, facilitator and audience. Conversely, across the spectrum of conventional commercial game development there is a relatively clear divide between creator/artist and audience, whereby the game development team creates a game experience (perhaps involving the target audience to a small extent in focus group testing) to completion with little direct participation from the audience. Game jams challenge and relegate the notion of audience to instead focus on elevating a group of creators who come together to produce work around a set theme or design constraints. These creators can be viewed as participants in the sense of post-modern art, as they do not define the themes or constraints (i.e. the creative vision) for the event, instead this is a construct predefined by the facilitators of the jam. In this sense, the 'artist' in a game jam could be argued to be the host who provides space, promotes a culture of practice and provokes creativity, improvisation, interaction and collaboration to bring the artwork to fruition. The emergent social interactions and

participative elements of the game jam itself, in this way can therefore be defined and framed as a temporal, performative artwork.

## 6. DEVELOPMENT CULTURES

In order to examine the proposition of game jams as a performative form of artwork the 'Development Cultures' project was treated as a case study. Development Cultures was a six-month long collaborative project which brought together industry practitioners, academics and students from the field of video games to share practice, develop relationships and stimulate discussion around the process, purpose and potential of experimental game design. Using the above discussion as a framework, Development Cultures was analysed with a view to understanding the processes and interactions that can take place over a series of events, rather than focusing on one distinct set of interactions. It is hoped that this analysis of a developing community of practice may reveal how game jams can be designed to be disruptive processes, and facilitate an understanding of how game jams might be interpreted as creative artefacts.

This case study is informed by observations of participants, interviews with participants during and after the events, social media commentary by the participants, and the results of a reflective questionnaire sent to participants six months after the project finished. Using data from the event and qualitative data from the participants allows for a rounded and reflective analysis of the project.

Prior to each game jam event, participants were brought together in informal workshops to discuss creative intent, motivation and development processes. These workshops allowed the group to form relationships, develop their understanding of working practices across the community and to identify themes and conventions within the group. These events helped to shape the creative direction of the community and underpinned the design processes behind the creative constraints, themes and focus of the jam events themselves. Through dialogue with the community, the facilitators were better positioned to identify potentials to disrupt process and thinking within the jam artworks to trigger improvisation, creativity and innovation.

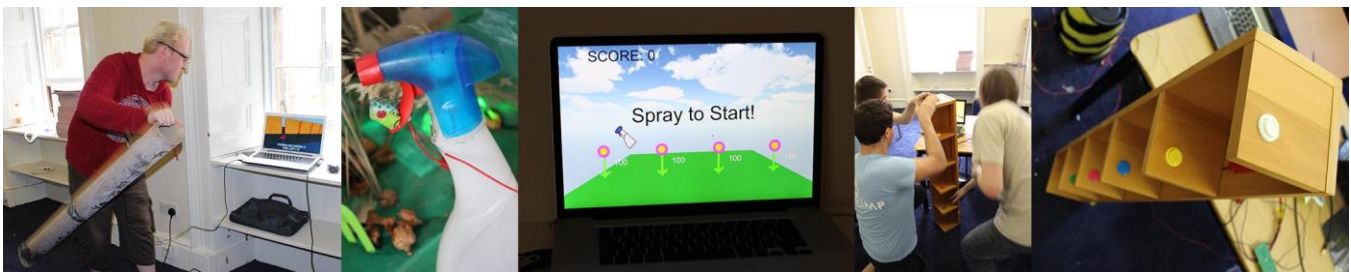
### 6.1 Analogue to Digital Jam

Analogue to Digital took the form of a five hour long game jam and asked participants to question their preconceptions about interaction, and in particular, input devices. Participants were required to utilise everyday objects as input devices for games to

form new ways for a player to interact with the digital realm. The disruption of the use of conventional inputs such as keyboard or controller aimed to inspire improvisation in interaction design and development processes. This workshop like Duchamp's Readymades and Brecht's Arrangements, requires the creator to reinterpret everyday objects and to negotiate new meaning within that object to facilitate the creation of an artwork (game). Furthermore, through the presentation of these objects in a gaming context, the player will be required to re-evaluate the potential of the object and its purpose, disrupting their preconceptions of the game play experience opening their minds to more experimental forms of gaming.

The workshop in this way questioned game design conventions not only in terms of input devices but the possible connections between physical input and the digital realm which, for the participants, set alight the imagination and drove new ways of thinking about game development. Participants were given analogue joysticks and buttons along with a range of everyday objects to customize. One participant noted that "When you're working in a physical realm it's a whole different ball game, you're making actions and so those actions can have consequences and they can mean different things ... you're sort of like, we'll try this... this sounds good but it doesn't necessarily work in its entirety." And another commenting "It's made me think about the ways games can be controlled, like the spray bottle...we kind of suggested it as a joke...and even then I thought this isn't going to work, but we plugged it in and it worked" another recognizing that "It's made us think more about different interfaces for games...anything with buttons can be made into a controller." The innovative potential of input devices and how they can shape player experience (for better or worse) was a clear outcome of the jam process, clearly, for the participants; all objects became live with possibilities.

To host this workshop, twenty three participants were invited to new workshop space, which none of the participants had previously visited. Many of the participants had professional and academic relationships to the venue within which the majority of the workshop events were held. This meant that they had pre-conceived notions of the conventions of these spaces and the behaviours expected within them [46]. In order to disrupt preconceptions of space and in turn possibly motivate new behaviours and innovation, the workshop was hosted externally and was facilitated by new members of the community. Expansion of the development community sought to disrupt developing conventions and motivate creative endeavour. The change in space and the addition of designed constraints aimed to



**Figure 1. The Analogue to Digital Jam produced eight prototypes, including: (left to right) A rowing simulator using a cardboard tube and reconfigured floppy disk as an action button, a gardening simulator which utilised a spray bottle and physical garden to navigate the digital realm and a reconfigured bookshelf where players had to use colour coded and competitive button presses to drive their digital characters in an onscreen race.**

help individuals to realize new ideas and expand their approach to game development. When asked to reflect upon the project as a whole, fifty percent of respondents referenced this jam as the highlight of their experience, noting, amongst others, that “The Analogue to Digital Jam was in particular stand-out, it was the first time most of us (myself included) have worked with custom controllers and it really opened my eyes to a whole other world of game development” and “I didn't realise how easy or cheap it was to wire up some arcade controls and make your own custom controllers, that was a very interesting development for me, and I'd like to try some more experimental design featuring unique hardware because of that.”

The designed constraints of utilizing analogue controls and thinking about the input device in novel ways clearly impacted positively on the processes and ways of thinking of these participants. The disruption of development space to inspire new behaviours may have impacted positively also on the outcomes, however, further study is required to draw clear conclusions on this matter.

It could be argued that the disruption of input devices, of development space and of development processes reframed participants understanding of conventional processes and approaches, which to some extent addresses Kwasek's suggestion that conventions must be challenged in order to be an experience which blur boundaries between art and everyday life [26]. A case could be made for the jam itself as an artwork or as a Happening, however, within this context the audience was absent and therefore, the extent to which the processes and approaches which emerged from this event benefitted the final outcomes and experiences of the player requires further consideration.

## 6.2 Jump Jam

The final event of the workshop series was a two day twelve hour game jam where industry professionals, academics and students formed teams to create experimental games, focussing upon a ubiquitous mechanic within computer games, the Jump. Again for this workshop, new participants were invited to join the community, with forty six participants in total taking part. This larger event was curated to ensure a proportionate mix of independent developers, students and academics to broaden collaboration and knowledge exchange.

Often, game jams keep the theme of the event a closely guarded secret [14,20,43,45] in order to build anticipation and ensure every participant has the same experience [14]. The Jump Jam on the other hand promoted the theme of the jam beforehand, to allow individuals to consider creative possibilities prior to their

arrival at the event. One participant noted this “allowed us to collaborate and share ideas in advance, building an atmosphere in groups and on social media before the jam began.” The focus on a very specific mechanic was very well received by the participants, with many noting a shift in process which “made us fundamentally reconsider basic assumptions and approach the idea from an increasingly narratological standpoint to complement the predetermined mechanic” or that “instead of throwing together a lot of disconnected ideas/mechanics you're forced to make this one mechanic really rich and engaging.” For some the focus on a specific and often overlooked aspect of game design disrupted thinking, enhanced processes and fostered creativity to some extent. On the other hand, one participant noted that the focus on “a mechanic rather than an abstract idea or notion...resulted in a more directed exploration of a particular range of genres, and could perhaps discourage people from taking a more free-form approach.”

Trends are evident in the outcomes of the jam, with five of the twelve final games utilising multi-player design, four of which relied upon competition to motivate play. In terms of genre, of the twelve prototypes, eight can be classified with four platform style games, two endless runner style games, and a further two exploring sports. The constraints applied to participant activity in terms of the theme may have led to these trends, however, innovation and subversion of conventions is evident elsewhere. Fifty percent of the final prototypes used novel forms of interaction (i.e. player movement, analogue input devices or sound as an input) or unconventional modes of presentation (i.e. multi-sided projection to create physical dimensions for the digital world). It could be said that the designed constraint to focus upon one core mechanic freed the participants from complexities of game design and allowed creativity to be applied elsewhere in their development processes. This is supported by feedback from another of the participants who believes “In my experience great game design comes when you have a game up and running, when you can see/play it and begin to explore, iterate and think deeply about the kind of experience you're trying to create. This of course takes a lot of time. So it's rare to be able to do any of this in a game jam...The rare cases when you do actually have the time to iterate is when you've got a really simple idea that involves a small number of mechanics. And that's exactly the kind of game you were required to make at the Jump Jam.”

The jump jam was designed to not only allow for experimentation and improvisation but also to facilitate community development, thus, the schedule was designed to include a number of social events including an introductory meet and greet, a social mixing event after the first evening and an arcade and awards event at the



**Figure 2: Screenshots from games produced at the jam from left to right: “Jump Star” a four player co-operative stacking game; “The Boy who Couldn't” a Leap Motion game where players have to bounce the character to avoid obstacles; “Castle Freak” a scaring game which uses the player's voice as an input; “Accelerunner”, a four player running simulator; “Phoenix Down”, a three player tower climbing game on a real tower.**

end of the jam. Across teams, community development occurred informally in discussions during breaks, in social events or online via social media. One participant noted that the nature of working closely in the same environment “breeds a camaraderie between everyone taking part. Everyone is under the same restrictions, and everyone is testing the boundaries as best they can. It creates an atmosphere where sharing ideas, content, technology is the done-thing. This is a stark contrast to the traditional world of game development.” Time constraints are typically associated with game jams, however, the inclusion of social activity as a core event in the project may have further facilitated development of relationships. Another participant suggests that such community of practice often develops within jams with “people willing to help other teams as needed by producing assets or helping to solve problems. It’s often a learning experience rather than a competition, with people specifically experimenting with new technologies or ideas.” Social media was used for sharing ideas, issues and group problem solving (using the hashtag #AGLJam). Social media also supports documentation of process and outcomes, with many participants posting final prototypes online, or creating articles and image archives [1,19]. Social media serves an important role in documentation and sharing of experience to the game development community beyond those participating in the event itself.

### 6.3 Reflections on Development Cultures

Game Jams offer a safe space for experimentation and improvisation, beyond that which can typically be supported within commercial game development. The conditions of game jams in general promote experimentation through their compression of development times and focus on themes around development. For participants this means (as one participant notes) “you don’t have time to aim for perfection but rather aim for something you’ll have fun making. This helps you stop dwelling on possibilities and start creating and it arguably promotes a more organic, less controlled process.” Game jams clearly benefit creativity through improvisation and experimentation: they disrupt normal working processes and encourage imagination and innovation through intense periods of development which focus on specific elements of game design.

When designing an event, curation of the community can have positive and negative outcomes. Curation can ensure a proportionate mix of developers with differing levels of experience and can shape behaviours and interactions within the community. However, game jams at present are democratic with places being allocated on a first come, first served basis. This approach ensures accessibility, but the random groupings can limit potential as it does not guarantee diversity in levels of experience or creative approaches. Development Cultures curated participation as an academic exercise to support the mix of practical and philosophical discussion required across the workshop series. Controversy surrounded this decision on social media with a number of individuals raising issue with a lack of awareness or invitation to the events.

It has been suggested that game jams aim to simulate industry practice and can be beneficial to participants in developing skills and abilities [44]. However, as one participant from the Development Cultures project proposes “Although jams encourage you to work more dynamically and rapidly than you

normally would, there are some fundamentals in terms of making decisions as a group and ensuring that everyone can contribute that simply can’t be ignored even in a “fun” or dynamic environment. I believe I learnt that effective jamming is actually a skill that you need to build up experience in, as with any other development methodology.” In this way, the game jam could be said to have its own working practices, modes of expression and potential, which are separate to industry practice. Game jams have the potential to develop interpersonal and technical skills of the individual, but the different modes of practice, lack of commercial focus and playful designed constraints make them a practice in their own right, independent to the needs of industry.

The recognition of game jams as their own mode of expression, as temporal artwork in their design and in their participation can in fact benefit commercial game development as one participant notes: “It encourages taking risks that would be impossible in a business environment...the opportunity to try stuff out, and more importantly the opportunity to fail without reproach is what made the jump jam, and game jams in general so special. It has coloured how we approach our development process in our office, where we are working to make more room in the schedule to try things out, and not be concerned if an idea doesn’t work out. Failure is still a valid outcome, it verifies that another idea is good, or that there is more work to be done.”

## 7. CONCLUSION

Development Cultures offers insight into the potential for game jams themselves to be seen as an artwork by evaluating the design of events to enhance community, share practice and disrupt process to lead to innovation and creativity. Development Cultures engaged with industry stakeholders ranging from independent developers to more established companies inviting them to collaborate with students, academics and industry peers in order to expand practice and understanding of the field of game development. Development Cultures began as an academic undertaking to create a community of practice and through this community, understand the potential for knowledge exchange and the study of experimental game development processes. However, through design of events and dialogue with participants, it is clear that the game jam can offer value beyond the extension of industry practice.

Game jams foster a new kind of practice which requires participants to apply fast thinking, flexibility and innovation in compressed development periods. Collaboration and camaraderie across teams working in the same space fuels a sense of community within each event and continuous participation across a series of events allows this community to grow. The jam itself does encourage new forms of professional practice in attendees, which can be recognised as a discrete output in itself. Furthermore, in designing a jam, facilitators should consider the structures they apply in terms of themes and constraints to foster creativity; the role of development spaces and the behaviours they enable; and how time and scheduling can be manipulated to encourage dialogue and social activity to further develop communities of practice. Curation of attendees can also help to diversify levels of experience and possibly shape behaviour, however, the impact of this aspect upon the experiences of the community and process of the jam is an avenue for future research. The role of the audience or player in

the creation of works could also benefit from further exploration as this project was not able to include the player as active participant in development.

In studying Development Cultures, it is proposed that the host or facilitator of the workshop series is the artist, as they define the constraints within which a community of practice improvises, experiments and collaborates to create their own artwork. Without the facilitator, these events and in turn the outcomes of the events (the game prototypes and the participants' learning) would not have occurred, and thus the game jam host can be seen as an artist and the process of participating in an event is the artwork itself. In Development Cultures every member of the community was invited to reconfigure their pre-conceptions of process, output and the player through a series of creative events. The work of Fluxus and Dada were motivated by more political and social means than the Development Cultures project, however, they share similarities in terms of reconfiguration of conventions and preconceptions. In this way, the project presents some challenges to the design and facilitation of game jams as a provocation of conventions.

Game Jams have the potential to disrupt game development processes, to foster innovation through improvisation and enhance practice and the potential of games as a cultural artefact. The game jam is a temporal artwork and like Kaprow's Happenings, only exist for the duration of the activity with the production and reception of outcomes somewhat indistinguishable within the space and time of the jam. It is not until after the jam has occurred, the artwork complete, that its remains, the prototype games can be fully appreciated by both the creators and by the players. By recognising the social interaction of participants within game jams as an artistic outcome, the facilitator can design spaces and constraints which breed innovation and creativity through disruption of conventions, thus challenging pre-conceptions to create new behaviours in participants.

## 8. ACKNOWLEDGMENTS

We thank all of the participants in the Development Cultures project for their participation in the event and qualitative activities in the production of this paper. We also gratefully acknowledge the support and participation of Lucky Frame, The Secret Experiment, Quartic Llama, Guerrilla Tea, Ninja Kiwi, Hidden Armada and Abertay University. We also gratefully acknowledge funding support from Abertay University to facilitate the Development Cultures project.

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