Part I

Cultures

2 Decoding and recoding game jams and independent game-making spaces for diversity and inclusion

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Abstract

While research on game jams internationally has proposed that they can be a useful context for informal learning, networking between indie developers, and innovation, in this chapter, we argue that they can also be perceived, and experienced, as exclusionary spaces by those who identify as women and individuals who are outside of existing game-making communities. Research on game jams in two different cities in Ireland for the Refiguring Innovation in Games project found that these events overwhelmingly attracted a young male demographic with existing programming skills. Since 2016, the authors have designed and run six adult 'female-friendly' diversity in games workshops in Ireland to encourage inclusive informal education and innovation. They took place at weekends in co-working innovation centers and formal educational settings provided by our partners. This chapter reflects on the recruitment, participation, and outcome of our workshops, but, in particular,

reflects on the explicit and implicit spatial and technical barriers faced by participants and organizers. While contemporary discourses and industry data seem to support the democratization of games production, contemporary software for game development and available learning spaces impose restrictions that continue to marginalize and impose a technicity that is gendered, classed, and raced. Adapting the work of Dodge and Kitchin on Code/Space and drawing upon a technofeminist approach, this chapter argues that explicit inclusion strategies are needed to address persistent structures of exclusion in informal and formal games education.

The growth of independent games production is often associated with a discourse that anyone can now make games because of the widespread availability of free game-making tools and new distribution channels. This discourse parallels a mainstream discourse that coding is a core skill in contemporary economies. These discourses emanate from Information and Communications Technology (ICT) companies, but also from European governments which invest significant efforts in promoting science, technology, engineering, and maths (STEM) as an occupation and educational choice. The efforts aimed at attracting children and teenagers into STEM often use hackathons and game jams. Despite these discourses and promotional efforts, the numbers of women and minorities in technology-based industries have stabilized and are going down in many countries, including Ireland. This is regardless of the increase in female participation in the workforce overall. Clearly, technology cultures, education, and occupations, of which games is a part, have a persistent issue with attracting and keeping women and other minorities. This is the wider context that shapes any initiative aimed at encouraging greater participation by women and others into independent and amateur games education and production.

This chapter presents the findings of a collaborative research project exploring diversity and inclusion in game jams and game design workshops conducted in different cities in Ireland

between 2016 and 2019. It focuses on game jams as a site of significant "game labor politics" (de Peuter and Young, 2019) – particularly in relation to inclusivity, gender, and approaches to making games. While the Global Game Jam (GGJ) provides the dominant template for a game jam, local instances of game jams are shaped by both global and local formations. Many of the first academic papers on game jams presented them as a positive and inclusive space for collaborative cultural production, innovation, and networking. Game jams arrived in Ireland over the past decade alongside free to download game-making software and a proliferation of local participation in online game-making groups. And yet my observations at local game-making events and game networking events jarred with the dominant discourses of widening participation and inclusion. The game-making events I attended in Ireland seemed to be populated by the same white, male, young faces that I had interviewed a decade earlier in professional companies. If the tools and distribution channels are democratizing and game jams are a social space where people of all skill levels can freely come together to collaboratively learn and create, why are the demographics of those attending these events so similar to the demographic profile of the mainstream games industry? And how independent are they really from the global structures of the games industry?

This chapter first reports on research conducted at three adult game jams which took place in three different cities in Ireland. These events were informal, organized by volunteers and usually attended voluntarily. The game jams were free to attend and open to everyone over 18 years. The chapter discusses who participated and their motivations for participating. It outlines how the design of these events can implicitly and explicitly exclude women and others and, in turn, may reproduce gendered representation in the wider game-making community and industry. The chapter then draws upon our experiences of organizing six adult female-friendly game-making

workshops in two different cities in Ireland. It reflects on strategies to overcome recruitment and participation barriers and our reasons for organizing female friendly, rather than women-only events. It proposes that the techno-spatial assemblages created in informal learning spaces can lead to the production of particular code/spaces (Kitchin and Dodge, 2005) which can limit the effectiveness of diversity interventions. Finally, the chapter reflects on how informal educational activities are shaped by the international political economy of the games industry.

The findings on both the game jams and workshops are based on surveys of attendees, observations, informal interviews, and an analysis of relevant online resources. Much of the academic literature on game jams is positive about their role in game development and innovation. However, relatively little of this literature attends to issues of non-participation or the demographics of those who attend. Similarly, the literature on independent games production and the rise of free to download game production tools focuses on the democratizing potential of these tools, rather than empirically mapping if their availability really is democratizing, and for whom. The chapter concludes by asking the reader to consider if some informal events, like game jams, are in fact reproducing both local, and distant, gendered, raced, and classed production cultures.

From game development to game-making cultures in Ireland

Game studies has a strong legacy of work focused on both professional and semi-professional industry and production studies (Dovey and Kennedy, 2006; Kerr, 2006; Dyer-Witheford and De Peuter, 2009). In the last decade, new game production logics have broadened beyond the processes, roles, and distribution channels of established triple A and online PC games (Kerr, 2017). This includes the development of new distribution channels for game makers, ranging

from the Android and Apple application stores to specialist websites like itch.io. While independent game start-ups are often supported by local and national industry programs, they co-exist with more informal creative collectives and communities of practice (Kerr, 2017: 159–164). These range from city-based clusters of game developers in the UK (Guevara-Villalobos, 2013) and Australia (Keogh, 2019a) to dispersed individual modders (Jarrett, 2019). Independent game developers range from DIY "craft gamemakers" (Westecott, 2012), to amateur "everyday developers" (Vanderhoef, 2016: 35), to "everyday gamemakers" which includes professional, amateur, and player game-making (Young, 2018).

Despite the emergence of a discourse of independent game developers, many independent game developers replicate the processes and game genres of established commercial studios (Ruffino, 2013), and demographic statistics on professional employment in the games industry in North America and Europe finds that it remains dominated by young, white, heterosexual men. The data on the employment and pay differentials in core development roles in the professional industry in the US, Canada, the UK, and Ireland remains stubbornly gendered and raced, particularly for programming and engineering roles. Surveys by the International Game Developers Association (IGDA) of full-time and freelance game developers over the past decade give us some insights into diversity and inclusion issues. The latest survey (n = 996 respondents) found that while workers and companies in the industry recognize the importance of diversity in relation to representation in the workforce (81%) and content (85%), respondents felt that there was unequal treatment of workers in the industry, and a sizeable minority reported experiencing or witnessing unequal treatment (IGDA, 2018). These responses came from respondents who are themselves not very diverse – male (74%), white/Caucasian/European (68%), and heterosexual (81%). Many respondents did not know if their company had a diversity or formal complaints

policy. We continue to see barriers and backlash against opening up game development to a wider range of perspectives and games, as #gamergate demonstrated (Shaw, 2012; Mortensen, 2018).

A government commissioned report published in 2017 in Ireland estimated that the audio-visual sector supported almost 17,000 full-time worker equivalents and just over 10,500 directly (Olsberg SPI and Nordicity, 2017). They found that just over 2000 people were employed in development and publishing of video games – but that the vast majority were employed in distribution-type activities including customer support and localization. This largely confirms previous research which tracked the undulating growth of professional employment in game development, and the rapid growth of below-the-line game support and distribution functions in Ireland (Kerr and Cawley, 2012; McCormick, 2012). Throughout the 2000s, the bulk of employment growth in Ireland was in support, rather than development roles. Consultancy surveys rarely give detail on the demographics of developers, but Kerr and Cawley (2012) note that the demographics of development companies in Ireland largely mirror the findings of the IGDA survey in terms of gender, race, ethnicity, and age. Over 90% were aged under 35 years and the respondents employed less than 13% women, falling to 7% when one looked at core development roles. The majority of the game companies who responded were less than five years old. In 2011, the Irish government launched an action plan for the Irish games industry with a focus on incubators, early stage investment, and education (Forfás, 2011). A local trade association 'Games Ireland' was established by indigenous and multinational companies, and for three years, it ran an annual 'Games Ireland Gathering' (GIG) conference. By 2011, there were almost 30 graduate game development and game technology courses in universities and colleges around Ireland.

As Keogh (2019b) has pointed out, formal surveys and action plans largely focus on established companies, multinationals, and the talent pipeline. As in other countries, the decade, since 2010, has seen the graduation of game-making students in Ireland and the growth of non-professional game-making. Participant observation and direct engagement in the local game-making scene by the author in Ireland would suggest that there are many more non-professional "everyday gamemakers" than those formally employed in games. Some are very early stage and not formally registered as a company. Some are surviving on social welfare. Some are working full time in banking, retail, or social media companies. Some are still students. These game makers are an important part of the local games community. Game developers, in general, and game programmers, in particular, move between the large and small companies, contracting for technology companies to pay the rent and working independently to develop their own game projects. Sometimes, the same people are founders of multiple companies. The large and small companies combined with freelance and part-time game makers have given rise to a vibrant local game production culture – although perhaps national, rather than local, is a better term to use. While many of the larger professional companies are located in the cities of Dublin or Galway, other game makers are spread around the country enabled by the spread of broadband and seeking lower living costs.

Independent game developers are often self-employed or working in micro companies of less than five employees. They are distributed throughout the island of Ireland, and they rely on non-formalized forms of face-to-face and digital social networking to meet. Most cannot afford to pay formal membership fees for national trade or professional associations. As in other creative industries, annual face-to-face gatherings can provide appropriate levels of "buzz" and networking opportunities to generate new employment prospects, new projects, or move old ones

along (van Egeraat et al., 2013). However, what has been striking are the number of ephemeral face-to-face and online activities that have emerged including a range of festivals, game jams, and online groups (Shepherd and Kerr, 2014). These activities are all the more interesting, given that the formal professional associations, including the Irish chapter of the IGDA and the trade association Games Ireland, are currently inactive. In their place, a local not-for-profit association focused on game makers has emerged. Imirt – which is the Irish word for play – is the Irish Game Makers Association, and it specifically positions itself to represent developers and makers of both analog and digital games, in line with the broader game makers term used by Young (2018). It charges a small membership fee and has an elected board.

Local game jams – open to everyone?

The growth of temporary social game-making events like game jams are not unique to games, and we can find such activities in music, arts, and crafts. Mark Banks (2007) argues that non-market clusters in music, art, and design signal a "re-moralization" of social and economic activities and provide support against the increasingly individualized risks associated with commercial cultural production. It would be a mistake however to think that all bottom-up informal social making events are being opposed to the market, and, in our research, we noted that independently run game jams can be shaped by the (sometimes competing) interests of sponsors, venues, software, and the expectations of the attendees. Indeed, attendees at informal game-making events are also subject to the unrelenting pressure in contemporary cultural economies for students to find internships, for freelance workers to develop extensive portfolios, and for everyone to continuously upskill in the latest tools.

Early game studies scholars highlighted the benefits of teaching people how to make games (Kafai, 2006). Today, there is considerable literature on game jams within game studies and the education field. The best-known contemporary game jam emerged from within the professional games industry. The annual GGJ was established in 2008 by the IGDA. The GGJ website describes the event as a "hackathon focused on game development", where game development is "condensed into a 48-hour development cycle" (GGJ, 2019). The website also notes that, in 2018, the annual event took place in "803 sites in 108 countries and with 42,800 registered participants". These produced and uploaded 8,606 games. One academic definition defines game jams as "accelerated and constrained" forms of collaborative game-making (Kultima, 2015). Attendees must design a game in a pre-defined length of time on a theme that is announced at the start of the day. Research on game jams would suggest that they are a useful way to motivate people to learn content, technical, and collaborative skills (Kultima, 2015, Locke et al., 2015). This work also found that there are many different organizers of game jams, including the games and technology industry, universities, and schools. A number of Irish universities and companies host GGJ events each year, but it appears that most are run by volunteers.

Rather than focus on the GGJ events, our research focused on an Irish-based independent not-for-profit organization called GameCraft, which runs four to eight game jam events each year. GameCraft was established in 2012 and uses the tagline "Connect, Create, Collaborate". Its website states that "GameCraft is a games jam event designed around building the gaming community. We aim to create events which allow game-makers to meet, share ideas, have fun, compete for prizes and most importantly make games!" (Gamecraft, 2019). It was established by two female programmers and is still predominantly run by one of them. A number of developers, makers, and academics serve on the board. GameCraft has been invited to organize events in

London, New York, Paris, and Vienna, but, over the past six years, most of their events have taken place in Ireland. We focused on GameCraft, because it differs from GGJ in a number of important ways. First, GameCraft events are shorter at 10–12 hours. Second, the event has a prominent code of conduct. Third, it encourages and provides materials for non-digital game-making and crafting. In all other respects, it appears to conform to the standard template – sign up is online, a theme is announced at the start of the day, people can work in teams or alone, and there is an end of the day play session, voting, and prizes. The website states that no prior experience is required to attend.

The author has attended a number of GameCrafts since 2013, but this chapter draws specifically on the findings of survey and observational research conducted in three different cities in Ireland between 2016 and 2019. Of the total attendees at the three events, just over half, or 53 in total, completed the survey. Our results largely confirmed our observations. Most respondents at the events identified as male (77% in Dublin, 93% in Limerick, 80% in Cork), white (92% in Dublin, 93% in Limerick, 85% in Cork), and straight (77% in Dublin, 93% in Limerick, 85% in Cork). Respondents in Dublin were fairly evenly distributed between different age groups, while over 85% of attendees in Limerick and Cork were aged from 18 to 24 years. These findings mirror the findings of studies of those who attend the GGJ. A 2013 survey of GGJ participants found that participants were 86% male, 56.5% were aged 21–29 years, and 60% had a college or degree-level qualification (Fowler et al., 2013).

Many of the attendees of these game jams were studying or had a college or degree qualification. Most of the students were studying programming or game technology. Of those that were not studying, most were working at least part time in the IT industry. This “open to everyone” event, which had sought to attract individuals with no game design experience, attracted mostly males

who were already studying games or working in the IT industry. A majority of attendees at both events were programmers (85% in Dublin, 57% in Limerick) or studying game development and game technology (81% in Cork). When asked about their motivations to attend, most respondents said that they were trying to improve game-making skills (92% in Dublin, 93% in Limerick, 69% in Cork) and to meet others in the Irish games making community (92% in Dublin, 64% in Limerick, 31% in Cork). Of note is that some of the students attending the game jam in Cork obtained formal course credits for attending. The fact that these events were held on university campuses, and some students had to attend for course credit, further reinforced the number of technical students attending and the blurred lines between formal and informal education in this context.

Of interest in terms of inclusion is that word of mouth, course lecturers, and game-specific online social media groups emerged as equally important in terms of recruiting people to attend these events, and many people arrived with friends and pre-formed teams. It appears that 'insiders' who are within existing social networks were first, hearing about the events, and second, felt secure in attending because they knew other people who would be attending. It was also striking that many already had some level of technical and game-making skills, and some had released their own social or educational games. While beginners were welcome to attend, few attendees were absolute beginners. Further, people had to bring their own equipment – and clearly this might also had constituted a barrier to attendance for some. These findings mirror those of recent studies which explore why people do not attend game jams. Key barriers include the timing of events (weekends/length), the location, the cost, and a fear of turning up and not being skilled enough to participate (Preston et al., 2012; Meriläinen and Aurava, 2018; Meriläinen, 2019). However, these barriers also reflect research on barriers to adult education more generally.

Boeren (2011) for example, found significant gender and class barriers to participation in lifelong learning in their analysis of the European Adult Education Survey. They distinguish between situational (work/life balance), institutional (timing, location), and dispositional (self-confidence) barriers to life-long learning and help us to situate game jams within wider educational research. In their analysis, cost and caring responsibilities were the most significant barriers to participation in lifelong learning for women.

Existing game jam research rarely comments on the extent to which these events rely upon volunteer labor. GameCraft relied upon significant unpaid and largely unseen labor by one key female volunteer, with support from mostly male full-time academics and industry representatives. The main organizer has an MA-level qualification in programming and is highly experienced at organizing IT and games events. She takes care of the technical, catering, and communicative structure of the events and takes care of the set up and well-being of attendees on the day. She is also the person people report any misconduct to. This role involves a large degree of face-to-face affective labor (Kennedy, 2018). More free labor and technical knowledge are embodied in the free and open source software used to advertize the event, run the sign-up process, and post the games after the event. Further, the attendees can be conceptualized as aspirational labor in terms of their temporal investment in self-training and social networking. The organization of these events, and their overall contribution to the "local ludic economy" (Kennedy, 2018), was completely reliant on the voluntarily given, and freely taken, labor of the main organizer.

Our surveys, observations, and interactions with attendees at these game jams helped us to understand the demographics and motivations of participants and the invisible labor involved in staging a games jam. These findings suggest that the communication channels and messages

employed by GameCraft were very successful at attracting young males who specialize in programming and are already interested in games, but were not so successful in reaching outside gaming communities and pre-existing social networks. Attendees were those with the requisite social, economic, and gaming capital and were insiders in the local game-making culture and word of mouth social networks. They were also those who were able to take advantage of the social networking opportunities that such events offer – becoming familiar with local formal educational institutions, companies/sponsors, and other game makers. Local games or IT companies sponsored the prizes and sometimes promoted internships and job opportunities at the events.

The findings from these game jams point to a stark-gendered division of labor with the female, organizational and communicative work largely unseen and unvalued, and the largely male programming and creative outputs at the events celebrated and often visible afterward online. Even though these events were shorter than the GGJ, they were still attracting a very narrow demographic, while the focus on making things work within a very short time frame places a priority on programming skills over other types of game-making skills. The intense day or weekend-long game jam format reproduces the intense, iterative, and agile production models adopted in the software industry, but is also reflective of wider patterns of project work in the creative industries. Based on this evidence, we would have to state that informal independent game jams are not necessarily an inclusive social space for learning, and the events can be heavily structured by local gender, race, and class structures. Further, if game jams are positioned as an entry point into the games or IT industry pipeline, they may be simply reproducing the problematic demographic structures already identified in the wider games industry.

Recoding inclusive game-making events

Respondents to our surveys were aware that GameCrafts were not very diverse – they noted that women, people over 30 years of age, and "non-Irish" people were missing. They were at best ambivalent about how to address this, and many did not want their game jams specifically addressing diversity issues. However, our research project was informed by a commitment to engage research and the feminist perspectives of academics and activists participating in the Refiguring Innovation in Games (ReFiG) research project. This five-year project aimed to intervene in game-making cultures, education, and industry to improve diversity. As a research partner, we endeavored to diversify the game-making community in Ireland through the development of more inclusive informal game-making events.

Many of our ReFiG partners had experience running single and mixed-sex after-school clubs, women-only incubation centers, and game jams for women and LGBTQ participants (Fisher and Harvey, 2013; Harvey and Fisher, 2014; Kennedy, 2018). Our local collaborators in Ireland had experience running 'female-friendly' programming workshops. These local events encouraged female attendees to bring along male allies, and those who identified as queer, non-binary, or trans. Our focus on equity of opportunity, and interventions for social change, was at times starkly different from the increasingly corporatized international approach to diversity and women in technology events. We also wanted to be independent of international and local technology diversity programs. Experience has shown that events focused on equity and social change are not always welcome. Some local event organizers have been criticized for organizing events solely for women and discriminating against others. Some local game-making themes have been viewed as too political. For example, a local independent game jam that focused on the 'repeal' abortion referendum in 2018 in Ireland had problems finding a venue to host them.

Following Boeren (2011), we can divide the key barriers to participation in local game jams into three main types: institutional (timing, length, location, venue), situational (life stage, caring responsibilities, income, access to technology), and dispositional (self-confidence, knowledge of games, knowledge of local games culture, peer network). We felt that we could address the first two sets of barriers in the organization of our events and the third through the content of our events. In the summer of 2016, we ran three beginner and female-friendly workshops for adults on successive weekends in Dublin city, and we repeated them in Galway city in 2018. We had 30 attendees in Dublin and 33 in Galway. The half-day workshops focused on game design, narrative design, and game coding, and many attended all three. Across the workshops, tutors introduced a number of software and game engine tools that independent game developers use including Twine, Fungus (a Unity plugin), and the industry standard tool, Unity. Elsewhere, we detail how we addressed the structural barriers to participation in game jams (Kerr and Savage, 2020), and we have produced a free to download manual and roadmap (Kerr et al., 2020). Key to attracting a more diverse set of participants were: learning from diversity research conducted elsewhere; advertizing outside online game channels; partnering with local diversity champions; monitoring signups for diversity; and changing the when, where, and how of the event format. Key to successful learning outcomes were carefully considering pedagogical and tutoring strategies, having low technology learning supports, pacing, and questioning the tools and examples we used to teach. We successfully managed to diversify participants in our workshops and attracted a majority of female and older attendees from a variety of creative backgrounds, from jewelry making to graphic designers. And feedback from exit surveys was overwhelmingly positive. One person stated that they “loved the day, very warm and welcoming”. Another “excellent hands on course. Well done to all”. Collaboration was encouraged, competition was

not. There were no prizes, deadlines, or ticking clocks. The tutors, organizers, and research assistants were paid for their time and expertise.

Our workshop goal was to work with local organizers, tutors, and diverse participants to create inclusive game-making spaces. Our interactive fiction and board game design workshops appeared to largely achieve these aims. However, we continued to encounter significant techno-spatial barriers when we attempted to run our game coding workshops. In an attempt to overcome the taken for granted requirement that learners "bring your own computer", we partnered with a local innovation hub in one instance to use their training center. However, the center had its rows of computers bolted to the tables – quite literally, the spatial layout presupposed an individualized learning experience with an expert tutor guiding the process. The training computers were too slow to adequately run the educational version of the game engine Unity – revealing another taken for granted presumption of the game engine developers. In addition, the organizational labor that required to support the coding workshops was significantly greater than the other workshops. This involved downloading and pre-installing the software, setting up individual student accounts, and having extra support tutors in the rooms. Yet again, we were struck by the dissonance between the free game-making tools aimed at democratizing game development and the invisible labor and barriers to actually making something with these tools. This free software only served to assimilate the tutors and the participants into the wider rationalistic, generic, and data-driven economies of the professional game-making software industry. Unity was developed in 2005 as a tool to create a first-person shooter game and then became a separate business product for the games studio. The company aimed to democratize game development and provides a range of pre-designed kits, assets, and drag and drop as well as coding functionality. While educational licenses are free, the software charges larger

development companies, a subscription fee based on game revenues. It has become the *de facto* tool for independent mobile, virtual reality, and PC game development. The Unity game engine now supports the development of content for 25 different platforms and is being used to develop content in other audio-visual industries and related fields.

The increasing dominance of game software tools like Unity in formal education and the games industry demands more analysis based on our experiences with informal learning workshops (Nicoll and Keogh, 2019). Our techno-spatial learning environments can be conceptualized as code/spaces in the sense that Kitchin and Dodge (2005, 2011) developed the concept. For them, code/spaces are assemblages created by the interaction of computer code and spaces of deployment. In our learning environments, this assemblage includes coded objects, infrastructures, and processes. While game engines might make game development more efficient, this efficiency comes at the cost of foreclosing some pedagogical approaches, design options, and ways of working. Users trade development time and design choice for pre-coded sets of assets, assumptions, and relationships. Engines are dominated by mathematical logic (Freedman, 2018) and exert "authorial power" over the process of games development, as Malazita (2018) has argued. In our workshops, a significant temporal dissonance emerged when we tried to introduce novice adult game makers to Unity. For beginners, the pace of the session was too fast. Feedback forms noted that the interface was not intuitive. Attendees wanted paper handouts. Peer learning and collaborative supports were restricted by the layout of the room. Many of these attendees had significant everyday computer experience and were working or studying in university. These potential game makers were struggling to conform to the prescription of what constitutes an everyday developer.

In the final analysis, this chapter would like to suggest that both informal and formal learning environments need to reconsider the empowering and democratizing discourse associated with game engines and tools (Keogh, 2019b). While clearly these tools are used by an increasing number of independent game-making companies and individuals to create games, they impose significant technical and creative limitations on game makers and presuppose certain gaming, technical, and design capabilities. They also require users to establish accounts and, by so doing, incorporate users into a transnational economy of datified learning. Research and interventions for inclusion need to consider how game engines transduce and, in some cases, conflict with feminist and critical pedagogical objectives and creative autonomy. Using game engines developed by the global games industry in highly structured local teaching spaces imposes significant technical and social constraints on creativity and innovation and may further contribute to the continued lack of diversity and inclusion in everyday game-making.

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