

Understanding Video Game Developers as an Occupational Community

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A fully edited, peer-reviewed version of this article was first published by Information, Communication and Society and should be cited as follows:

Weststar, J. (2015, online). Understanding video game developers as an occupational community. *Information, Communication and Society*. DOI: 10.1080/1369118X.2015.1036094

The video game industry has rapidly expanded over the last four decades, yet there is limited research about the workers who make video games. In examining these workers, this article responds to calls for renewed attention to the role of the occupation in understanding project-based workers in boundaryless careers. Specifically, this article uses secondary analysis of online sources to demonstrate that video game developers can be understood as a unique social group called an occupational community. Once this classification has been made, the concept of occupational community can be used in future research to understand workers in terms of identity formation, competency development, career advancement and support, collective action, as well as adherence to and deviance from organizational and industry norms.

Keywords: occupational community, video game industry, technical labor, cultural labor, creative labor

Word count: 7750

Workers in project-based environments often experience boundaryless careers (Arthur & Rousseau, 1996). Such environments are typical in the creative/cultural industries such as film, theatre and television where the project (i.e., the movie) has a defined start and end and workers are hired to perform specific roles during specified periods of the project life-cycle. These environments are also common in information and communications technology (ICT) fields. In these occupations the ability to move from project to project and employer to employer is key to career advancement and sustainability. In this way the career is ‘a series of mutually negotiated transactions between organizations and individuals rather than a long-term relationship between employer and employee’ (McLeod, O’Donohoe & Townley, 2011, p. 114).

Within this context, the organization is less important in shaping the sensibilities and experiences of workers. Rather, as DeFillippi and Arthur (1994) argued, we must return to the occupation as the nexus of competency and identity development. Barley and Kunda (2006) also make the case for the importance of occupational organizing. For many workers with boundaryless careers, it is most often the occupational group and not the firm that sustains and invigorates career identity and motivation, the attainment and maintenance of transferable skills, and the development of fruitful social networks. The collective concepts of occupational careers (Slocum, 1966),

industry communities (DeFillippi & Arthur, 1994), communities of practice (Lave & Wenger, 1991), and occupational communities (Salaman, 1974) point to ties that connect workers across organizational boundaries.

In this vein, there is a growing literature that seeks to describe groups of workers as occupational collectives. A number of these focus specifically on technical workers such as technical contractors, internet technologists, and computer support technicians (Kunda, 1992; Orr, 1996; Zabusky, 1997; Bechky, 2003; Benner, 2003; Damarin, 2006; Marschall, 2012), and on cultural/creative workers such as musicians and advertising creatives (McLeod et al., 2011; Coulson, 2012). Taken together, video game developers blur this technical and creative boundary because they sit at the nexus of the entertainment and ICT industries. The project teams for video games are made up of both technical, artistic, and design specialists. These teams are closely interdependent and in smaller teams single individuals often hold multiple roles.

Video game developers (VGDs) therefore present a unique case in the application of occupational community to a group with diverse occupational specialties. They are also an understudied group. Though game market revenue is larger than the film and music industries (Reuters, 2011) and significant research focuses on the cultural and communicative aspects of video games, the research on VGDs as workers has emerged more slowly (i.e., Dyer-Witthford & de Peuter, 2003; Cohendet & Simon, 2007; O'Donnell, 2009; Weststar & Legault, 2012; Prescott & Bogg, 2014).

This paper adds to the body of work on occupational community by providing preliminary evidence showing that VGDs constitute an occupational community. It begins by situating video game development within the literature on technical and creative occupations and describing occupational community. Following a discussion of the data and methods, the paper presents evidence to show that VGDs exemplify the four elements of an occupational community. The conclusion discusses implications, limitations and future research directions.

Overview of the video game industry

VGDs are the people who contribute to the making of video games. The complexity of modern video games requires workers with varied skill sets such as computer engineers and programmers, visual artists, audio engineers, animators, game designers, writers, and quality assurance testers. Each project team also has a producer and studios have a range of upper managers and administrative personnel. The industry also increasingly employs models and voice actors. The industry has also attracted a host of game critics, journalists, and a robust fan culture. This study will focus on those engaged in the core work of video game development.

According to a survey by the International Game Developers Association (IGDA) (Edwards, Weststar, Meloni, Pearce & Legault, 2014), 70% of VGDs are full- or part-time employees of game studios, 15% work freelance or on contract and 15% are self-employed. This statistic might indicate stability in the employment relationship; however, it belies the churn that takes place within the industry and hides its project-based structure. This project-based work arrangement is paramount for other creative/cultural and technical occupations and video game development shares many of their labour process characteristics. The making of each video game is a project

with defined pre-production, production and post-production phases that require different resources (Callele, Neufeld & Schneider, 2005). Therefore, VGDs face churn at each stage of the project life-cycle. This creates intra- and inter-organizational mobility as developers can be reallocated to new teams within the same studio for a game at a different production stage, or laid off to seek new work. Therefore, unlike the film industry, for example, which no longer has fixed 'employers' (Faulkner & Anderson, 1987) or the completely flexible work settings of freelance web producers (Damarin, 2006), most VGDs experience a career in which they are hired as permanent employees, but temporarily. Survey data shows that the average job tenure is 3.5 years (Edwards et al., 2014). This employer requirement for numerical flexibility (Kalleberg, 2003) and resulting worker mobility is enabled by the clustering of firms and the spin-offs of new ventures. The clustering of studios in one geographical location creates a large local talent pool that can cycle among the employers.

Despite this mobility there is not a culture of information sharing among firms in the game industry. Akin to both the competitive creative environment of the entertainment industries and the ICT field, intellectual property is closely guarded through non-disclosure and non-compete agreements. It is rare that firms will formally collaborate on initiatives outside of specific contract agreements that often indebted smaller studios to larger developers/publishers (Whitson, 2013). Unlike the ICT fields, but similar to the cultural industries, the game industry has porous entry where perceived ability or demonstrated talent is a more salient signal than a formal credential or certification. Like theatre work, there are limited institutionalized systems for employee development and individuals are solely responsible for their employability (Haunschild, 2004). Training and credential systems are underdeveloped and are often imperfect signalling devices for good talent. The peer group ultimately validates true ability and so reputation in the peer group and a strong portfolio are the drivers for success (McLeod et al., 2011)

Under the project-based model, the outputs of each new game are unique, the environment is complex and uncertain, and coordination among project members is rooted in diffuse and informal power relationships among those who direct the work and those who perform it (Faulkner & Anderson, 1987). The average top-tier ('AAA') console game costs \$8.7 million to produce (ESA, 2011), yet only 4% of video games that go into production break even (Whitson, 2013). To achieve project success, the *iron triangle* of constraints, are paramount drivers in the lives of project team members. Each game must be completed on time, within budget, and have sufficient attributes to be popular among consumers, because pre-release marketing and the date of product release are decisive factors of success (Kline, Dyer-Witthford & de Peuter, 2003).

Like other star systems, those who succeed are well rewarded. However, the glamour and economic pay-off of success is a powerful veil over the inherently secretive, competitive, and largely risk-averse nature of the mainstream core of most creative industries. VGDs experience a host of challenges that are similar at least in kind to other project-based workers: sustained long working hours ('crunch'), unlimited and unpaid overtime, poor work-life balance, musculoskeletal disorders, burnout, unacknowledged intellectual property rights, limited crediting standards, non-compete and non-disclosure agreements, and limited or unsupported training opportunities (see Legault & Ouellet, 2012; Legault & Weststar, 2012).

Concept of Occupational Community

The term occupational community (OC) denotes a group of workers who, through their identification with their occupation, share a common set of norms and values (Salaman, 1971). This shared culture of an OC is different from organizational culture. The study of OCs explicitly takes the work and the worker as a point of reference (Van Maanen & Barley, 1984). As such, OCs can exist beyond the boundaries of workplaces or geographical locations. The analysis is approached from the perspective of the members of the occupation and the community is shaped by, but is separate from, organizational goals.

Riley, Lockwood, Powell-Perry and Baker (1998) outline this distinction in their study of UK pub workers. These workers display a strong commitment to the industry rather than to any particular pub. When faced with a challenging job that garners low wages and high employment insecurity, 'what holds everything together [for a pub worker] is an appreciation of "pub life" as a cultural norm.' (Riley et al., 1998, p. 167) This sharing of norms contributes to the development of an OC of pub workers across organizational boundaries.

Van Maanen and Barley's (1984) definition of OC has four elements: 1) boundaries, 2) social identity, 3) reference group, and 4) social relations. These four elements will be used as the primary theoretical basis for this article, although supporting reference will also be made to an expanded list developed by Trice and Beyer (1993, p. 26-39) and articulated in Marschall (2012). These four elements are presented as distinct factors, but they are mutually reinforcing.

First, *boundaries* are the metaphorical wall that separates members of the community from non-members. These boundaries can be observed in the social dimensions that community members use to recognize each other. They are the parameters of inclusion. Boundaries are created through internally constructed connotative notions of belonging that are socially meaningful to the insiders of that group. Though they may not be readily seen or understood by casual observers or outsiders, the boundaries of an OC communicate and reinforce the appropriate, required and/or expected actions and interactions of group members. In this way members are deemed 'to be' part of the community through demonstrated behavioural enactment rather than through denotative labeling due to geographical proximity, shared employer, or shared occupational title or skill-set (Van Maanen & Barley, 1984, p. 295). Three of the seven characteristics listed by Trice and Beyer (1993) map to the boundaries element: 1) members have esoteric knowledge and expertise; 2) work involves danger, extreme situations, or unusual demands; 3) members are conscious of insiders and outsiders.

Second, members of an OC share a *social identity* that is drawn from their occupational role. This identity is highly valued and defines the presentation of the self to others. This is most commonly evidenced through particular accoutrements, jargon, or dress. Identity codes can also take the form of inside jokes, conversational reference points, and consistent cultural forms understood by insiders (Trice & Beyer, 1993; Marschall, 2012). In his exploration of funeral directors, Barley (1983) noted that OCs with particularly arcane and prevalent codes derive a heightened sense of identity from their use and display. Social identity is also seen through an absorption in the work that goes beyond traditional notions of job satisfaction. OC members have such high involvement with the symbolic nature of the work itself that those who do not do that

kind of work are perceived as being fundamentally different. The work tasks come to have social value in the group and favourable ideologies are built around group self-image (Trice & Beyer, 1993).

Third, the *reference group* element means that members of an OC take each other as their primary point of comparison when engaged in self-reflection. This referencing is reinforced when the OC is marginalized, if the occupation penetrates multiple aspects of life, and if there is a rigorous socialization process as part of being inducted into the occupation. The notion of a reference group links the concept of OC to other manifestations of occupational organizing such as communities of practice (Lave & Wenger, 1991) and the active social networking that is important for the support and development of those with boundaryless careers. Regarding the community of musicians, Coulson (2012, p. 256) wrote, ‘musicians’ networks can then be thought of as overlapping circles of contacts contained within, and coloured by, the wider music community whose members they identify with and whose existence they work to support.’ For musicians, the collaborative reference group of other musicians is critical not only to financial stability through successful contacts, but perhaps more importantly as a non-competitive source of camaraderie, shared passion, and freely given support. Through the interaction of a reference group, occupational members also come to codify shared standards for the quality of the work (Trice & Beyer, 1993) and directly and indirectly push each other to grow the craft.

Fourth, an OC shares *social relations*. This refers to a blurring of work and leisure whereby members are close friends with other members of their occupation and/or the work of the OC permeates non-work life (Trice & Beyer, 1993). This conjunction of work and leisure does not necessarily imply work-like hobbies, though that is common. Salaman (1974) described railroaders who built model trains and displayed them to each other, while Braverman (1974) described loomweavers who engaged together in botany and entomology. As exemplified by Lee-Ross’ (2004) accounts of seasonal hotel workers, the social relations of an OC are reinforced by proximity and work characteristics that constrain the times and modes of recreation. With respect to cruise ship employees, workers can only socialize with other workers on-board the ship (Lee-Ross, 2008). Marschall (2012) also noted that the long hours worked by internet technologists often dictated their leisure choices because they were out of sync with the 9-5 routine of the world around them.

Data and Methodology

This paper employs a thematic and hermeneutic analysis of secondary source online material (Phillips & Brown, 1993; Prasad & Mir, 2002; Bowen Martin & Deuze, 2009). VGDs have a strong online presence and this shared social space can act as a research site (Kollock & Smith, 1999). In this space, VGDs showcase their opinions, values, and preferences about the goings-on of the industry by posting blogs, and commenting on forums, news stories and opinion pieces.

The online data can be grouped into four general source types. The first type of source is the electronic magazine. An example of this is the website Gamasutra (www.gamasutra.com) which employs paid staff and freelance writers and also solicits and publishes feature articles and opinion blogs from non-paid contributors from the video game community. This site reports recent developments, provides game previews and reviews, interviews key industry players, and

hosts a job board. A second source type is game studio websites. These sites report the goings on of the studio, their 'about us' statements and philosophies, and often host open discussion boards and forums. A third source is the website of the IGDA. This posts news, contains special interest group newsletters and meeting reports, and publishes advocacy and research reports. A fourth source type is the individual blogs/websites of game developers.

As a whole, this online content is a corpus of naturally occurring, publically accessible, linguistic sources that showcases the work and workers of the video game industry without interference, prompting, or direct observation. It produces a rich self-reflective and completely member-generated account of the industry's norms, behaviours, challenges, successes, and expectations. The act of writing is socially purposeful; therefore, hermeneutic analysis applied to these online texts is a means to understand the values and social practices that underlie the group (Phillips & Brown, 1993).

The data cover a four year time span (2008-2013) and also include the extensive comments that were written in response to a particularly influential 2004 blog that remains a key industry reference¹. To obtain the sample, key word searches were conducted on topics that seemed fruitful for evidence of OC in that they represented meaning arenas (Westenholz, 2003). Meaning creation takes place in a meaning arena that is 'formed around issues or fractures emerging in work practices. These issues give rise to "actors" with different and sometimes opposing identities and interpretation to the issues' (Westenholz, 2003, p.5-6). As an OC is a social construction process (Weick, 1995), meaning arenas were sought where the accepted and contested norms of the community would be on display. These topics included discussions about working conditions, industry changes, industry crisis points such as studio closures, employment practices of specific studios, and debates about negative perceptions of video games (i.e., sexism, violence, obesity).

This resulted in 246 main articles and their associated reader comments. For the thematic analysis, complete sources and individual components of articles or discussions were coded according to the four characteristics of OC. Following this, a hermeneutic analysis was conducted (Phillips & Brown, 1993; Prasad & Mir, 2002). This approach sees texts as representing a 'socially constructed system of meaning' (Phillips & Brown, 1993, p. 1548) and that marrying an analysis of the specific content of the text to consideration of the text's unique social, cultural and historical context at the time of conception gives rise to a creative 'interpretation-reinterpretation' (p. 1554) moment on the part of the researcher. Hermeneutic analysis is appropriate for this research because it 'involves understanding not only how contextual events determined the contexts of the texts, but also how the texts in turn contributed to re-actualizing or maintaining the dynamics of cultural narratives or forms of sensemaking extant within the larger context.' (Prasad & Mir, 2002, 97) I use the concept and themes of occupational community as the frame for this larger context. Regarding presentation of the data, the large sample allowed for collocation and saturation of various perspectives to help ensure the validity of the specific examples put forward below.

Regarding pseudonyms in the presentation of the data, online articles, blogs and comments are "firmly located in the public domain" (Hookway, 2008, p.105) and therefore all names have been kept in the format as they appear(ed) online. Inherent in blogging is the paradox that people are

able to write for an audience but remain as anonymous as they desire (Hookway, 2008). Bloggers often use their own pseudonyms when they desire anonymity or privacy in their work or wish to present an alternative public identity (Eastham, 2011). Furthermore, and following Eastham (2011, p. 359, Fig. 1) in making decisions about the need for anonymity, consideration was given to the intent of the blog and the accessibility of the blog. There were no indications (such as non-indexation, registration, sign-in or closed comments) that signaled an increased desire for privacy.

Findings and Discussion

Are video game developers an occupational community?

Boundaries: Game jargon and extreme work

A cursory glance at any article or discussion about video game development shows the boundary element of esoteric knowledge and specialized language. The following excerpts are taken from game critiques and post-mortemsⁱⁱ that were written by members of the community to members of the community. Their denotative purpose is to promote sharing and learning about the craft of the field. However, what this text also signifies is that belonging to this group requires deep understanding of the terminology of game production, game play mechanics, and the game canon. These texts adopt a casual tone and assume reader knowledge in a way that implies joviality and camaraderie (noted specifically in the “stoneskin, anyone?” comment). Through an analysis of these features they can then be interpreted less as a teaching text for anyone interested in the field and more as a discussion among friends who share an insider level of experience and expertise. It can therefore be interpreted that an underlying message of these texts is one of not belonging for those who cannot follow along.

The gameplay of Xenoblade in many ways feels like the next step up from Final Fantasy 12's design...Xenoblade's combat leans more towards the MMO side of things compared to JRPG design and this could rub fans of the genre the wrong way... (Josh Bycer – personal blog posted on May 16, 2012)

The sprite is then color-mapped using a 256-color palette swap to enable player colors. Following the remapping, any number of further palette-manipulation code (stoneskin, anyone?) can step in and further change the actual data. Then the sprite is rendered against whatever potentially covering elements are nearby (Trent Oster – Game Developer article from May 1, 2013).

To jump momentarily to the element of reference group, these technical and intimate exchanges can also be interpreted as a means to validate and elevate the art-form of game-making. Though games are becoming increasingly ‘mainstream’, game developers can still feel marginalized or trivialized by such things as the negative social stereotypes of male adolescent game players, the violent and sexist content of some games, and the notion of being paid to play games. Given this context, the specialized language and internal referencing to other games or technical and creative processes connotes expertise and legitimacy and supports a socially constructed

narrative of importance. This gives the members of the community an interpretative frame of status and legitimacy that they can then hold against outsiders that can be critical of their work.

OCs form more readily when group norms coalesce around dangerous job tasks. While video game development cannot be considered dangerous in the same way as police work, for example, it can be extreme in terms of the pace of the work and extended periods of overtime or ‘crunch’ (Peticca-Harris, Weststar & McKenna, forthcoming). The act of experiencing the extreme scenarios of crunch is a shared bond that reinforces the boundary between insiders and outsiders. When presented with online stories about challenging working conditions, outsiders most often respond with surprise and shock while VGDs are more likely to respond, either in a supportive or unsupportive tone, with a lack of surprise and the telling of their own story. A deeper analysis reveals that there is a historical legacy of long hours in the industry, a pervasive view that crunch is necessary to game development, and, therefore, a relatively low expectation that this will change. In this context, commiserating survival stories can be read as an offer of support in the face of an inexorable force, and critical comments can be read as a call to toughen up to survive. Surviving crunch is valorized and can be born as a badge of honour and a signal of being a true developer. In the expressions of solidarity that are made through shared stories, the underlying message is one of gained experience and credibility and the sense that to truly belong is to have such a story to share.

VGDs also show fulfillment of the social identity criteria for occupational community, discussed more below, when talking about long hours:

It wasn't fear of losing my job that motivated me to work these insane hours. More than anything, it was loyalty. I felt loyalty to all of the other programmers on my team who were working longer hours than me...and I felt loyalty to the team as a whole. I depended on these people to help me get my job done every day, and they depended on me (posted by wasdisgruntled on EA Spouse blog Nov.11, 2004).

Online comments are replete with statements about commitment to the work, to the game, to the fans and to the team that fit with Van Maanen & Barley's (1984) notions of commitment to the craft and responsibility to other members of the OC.

Reference group and social identity: Socialization and work absorption

The themes of early socialization to the industry and absorption in the work are key components of the reference group and social identity elements, respectively. The majority of VGDs were and are avid game players; they have a self-professed passion for games and wish to make this their life work. A key to employment is showcasing that you have made and can make fun games. Though team members have specific skill sets, the shared motivation is to find the fun, the novelty, and the wow-factor. Therefore, the heart of being a good game developer remains rooted in the idea of being self-taught, continually improving, and following one's grounded instincts. There is a recurring question posted on discussion boards by aspiring game developers: ‘What should I do to get into the game industry?’ This question is not answered with a list of educational programs. Would-be game developers are more often counseled to make games and

practice their craft at all times. On the denotative level, these are suggestions to help a person along, but on a deeper level, in the context of a reputation-based labour market and mobile industry, these can be interpreted as communications from the in-group about the professional norms required for inclusion. The expectation for belonging is complete devotion to the work:

As to *when* you should be working, the answer is simple: *all the time*. The game industry is a meritocracy that's known for its twelve-plus hour work days. If the limit of what you're doing to prepare for your chosen field is classwork, then you're already failing to live up to that standard – even if you're getting straight A's...Character modelers will often crank out a Zbrush sculpture of a character or creature each *day*...These practice sculptures have exactly nothing to do with their day job. They do them because they like doing it and for practice... (Michael Prinke – article on gamecareerguide.com on May 13, 2010, emphasis in original)

In addition, developer hopefuls come to the industry early as volunteer beta game testers or interns. As such, individuals are exposed to the OC of game development well before their first job in the industry. Indeed, most job advertisements show the requirement to be fully indoctrinated in game culture in order to land a job. A sampling read: 'Must love to play games'; 'Must be an avid gamer, of course'; '...a passion for games, Halo, and trying new things...Rabid Halo fan - be prepared to demonstrate that you've played and thought a lot about the game.' Advertisements in *Game Developer Magazine* included the following: 'actively hiring a new age of visionaries'; 'Heroes Wanted'; 'Prepare for the adventure of a lifetime'; 'Are you awesome enough? Prove it'. Collectively these ads communicate the absorption in the work that is a key feature of the social identity of occupational communities and seemingly present in game development. This is not to say that video game developers are different from other 'new economy' workers in their self-professed passion for their industry and work and that is what designated their community. Rather, the legacy and commitment to games and game making is a special attribute that is not shared with other ostensibly similar workers. With respect to the boundaries element discussed above, this language also sets the tone of reference for insiders and outsiders about who belongs in this industry. A game developer writing in the midst of an exposé of overwork and poor treatment at his studio still had this to say:

I believe many of us at the studio are putting a massive amount of love into the game we are creating...When it's all said and done, I love my studio, I love my game, and I love my team, and I wouldn't give this up for the world (comment posted by Code Monkey to Rockstar Wives blog on [Gamasutra](http://Gamasutra.com), Jan 9, 2010).

An analysis of how these positive statements come to exist in the context of documented hardship at work leads to the interpretation that virtually anything is worth the sacrifice to make games. Among community members this then creates and maintains a narrative of value in the craft, of struggle and survival, and of dedication and commitment to the community and its ideals.

Social relations

The boundary of the OC, and the corresponding sense of belongingness, is reinforced by the social relations of the group. In a developer survey, 61% of respondents agreed or strongly agreed that their interests and hobbies are work-related and 57% agreed or strongly agreed that they tend to socialize with the people with whom they work (Legault & Weststar, 2012). There are also many events that bring game developers together to socialize. These can be localized in cities or regions, such as those hosted by local chapters of the IGDA, or groups like Full Indie (Vancouver), the Hand Eye Society (Toronto), or the Mont Royal Game Society (Montreal). Game developers also interact at large events such as the Game Developers Conference (GDC) and E3 (Electronic Entertainment Expo). These conferences are more than an academic exchange of information or the chance to build a network. They circle around intense socialization and many of the sessions directly engage with the visioning process for the industry and the developers embedded within it. For example, recent GDC conferences have devoted a number of sessions to the topical issue of the underrepresentation of women. Panels of veteran female game developers speak to packed rooms about the history and future of the industry vis à vis gender equity.

Specific extra-curricular activities such as ‘game jams’ are also organized either within studios or across a particular geographical area. The following is a blog excerpt describing one such event:

Championed by our lead engineer..., the 24hr Game Jam was created as a way for us to do something quick, dirty, and fun ... and maybe let out a little steam in the process. The goal is always to make a game, from start to finish...in 24hrs. We go from 10am Saturday to 10am Sunday, and then whatever we have, we lock it up. ...we just wanted to see how much fun we could make in a day. Oh, and our game designer...wanted something that was multiplayer that we could enjoy in the office (Kellee Santiago on Playstation blog, March 10, 2008).

These game jams show an inclination to invest non-work time in work-related activities with other members of the occupation. As a public text, this blog can also be interpreted as a signal and reinforcement of these social norms across the community. When this blog was written the author was the President and co-founder of a highly regarded game studio called Thatgamecompany (TGC) that had released a number of critically acclaimed avant-garde games. The text was posted on a blog representing one of the top game consoles (Sony Playstation). This text could simply be read as a self-serving indulgence in TGC’s success and their particular ways of being. However, due to the context of its presentation, the deeper interpretation of this text is that off-hours socialization and side-bar game making is essential to team and studio success and should be a basis for developer stress-relief and happiness. This blog shows what a successful studio does and it therefore implies what good game developers want to do and communicates what others should do.

VGDs can also be externally constrained into socializing with each other due to their long work hours. This is similar to the experiences of internet technologists (Marschall, 2012) where socialization with members outside of the particular project team or outside of online contact is inhibited. For VGDs this is exacerbated by the confidentiality and secrecy of studios, the rigid deadlines, and the interdependencies of the work that do not allow them to work from home. In

some studios crunch time is followed by extended compensatory time off which, since it is shared by other developers on the team, also encourages team members to spend that time together.

An emblematic example

The OC elements of the VGD community are particularly salient when seen through a hermeneutic analysis of an online exchange sparked by a blog written by a person named John Hahn. On the face, an analysis of the text indicates that John is someone who is thinking about a career in the industry, but has concerns about whether a lifelong career is possible. He mentions some of the challenges that are often expressed in relation to game development: long hours, limited crediting for individual contributions to a game, and, in his view, relatively low pay compared to other opportunities for programmers or to the entertainment industry. John's tone is friendly and of one seeking advice, but his blog can also be interpreted as a criticism of or challenge to current members of the VGD OC because it implies that they should not settle for these conditions, or that the industry is 'bad' for allowing them. The purpose of the text that blog readers submit back to John can then be interpreted as a response to an outsider who doesn't 'understand' their community and as a tool for educating him about the values of game development. Their words then represent an act to justify and validate their own choice to work in games. The following is a selection of the reader comments to the original post (John Hahn's blog on Gamasutra, April 21, 2009):

Mac Senour: ...I just can't imagine doing anything else! And I think there in [sic] lies the difference, games are my life and have been since I was 19.

Jason Weesner: ...Everybody I work with loves what they do and that's precisely why they do it! ...If you're looking for a return on your personal investment that is substantially more than just the opportunity to make games, this industry is not for you.

Ted Brown: ...Paid overtime is virtually unheard of...So why am I still here? It's because I can't imagine a career doing anything else. I work with smart people. We tackle interesting problems. I'm paid enough to support a family. And I could work almost anywhere in the world. It is hard? Sure. Is there crunch? Sometimes... Is it worth it? Definitely

The actual language and themes of these comments denote individual accounts of a love of game development and an inability to see any other career as a possibility. Given the context in which these texts were produced – that of John's skepticism of the value of working in the industry and a rise in general criticism about the work practices of the industry – these comments become more than individual statements. They can be interpreted more deeply as a moment of re-actualization where the writers identify and embrace the values of people who make games and use them, shield-like to exclude those outsiders (in this case John) who don't share those values or who are looking for something else beyond the 'opportunity' to make games. This defines the boundary of their OC. The social identity element, where people who do not do the work are

fundamentally different and favourable ideologies are built around group self-image, is also showcased here when Ted Brown says he could work almost anywhere in the world. The interpretation is that he chooses game development not because of the fit with his skill set, but because of a deeper connection to the work that makes him different from others perhaps with his same skill set. Within the context of these texts we can surmise that this is the same connection that Mac Senor invokes when he says that games are his life. John posts his own comments and asks why VGDs don't become rich and famous like in other entertainment industries:

Ted Brown: When people play a game they are the focus. They are the actor. Does that make sense? There is no "artist" that people associate with a game...Shigeru Miyamoto will never be as famous as Mario. Or Link. Or any of his myriad creations. But among his peers, there are few equals.

Alan Jack: ...game developers are never going to be famous, and that – in my opinion – makes this the most honest medium out there.... Games are the most honest medium because there's no hiding the fact that everyone in a team, be it 10 or 1000 people, contributed to the finished product. Even then, the experience of play is shared between the games [sic] 'authors' and the player. If you want to be famous, be a rock star... If you don't care about that, but want to work at the cutting edge of current thinking on entertainment, work in games...knowing I helped contribute to something that entertained thousands is an incredible rush....stop comparing games to other media. We're not like them, we're our own thing.... We don't need film-school drop-outs clogging up our industry, we need people who are in this industry because they want to entertain, move and share experiences with people.

In these comments Ted Brown and Alan Jack juxtapose game development against other entertainment industries that share many occupational characteristics in terms of specific job tasks and required knowledge, skills and abilities. But they imbue the workers in those other fields with motivations that are not shared by game developers and those motivations are presented negatively. The interpretation is that despite the fact that many workers in the game industry could work in other jobs – more typical IT roles, new media, or artistic and technical roles in film and television - they work in games because games are different and they are different. That consciousness of outsiders and insiders demonstrates a boundary that causes an OC to form.

Within that boundary and to maintain that boundary the in-group builds a narrative of shared social identity and reinforces that identity through a closed circle of self-reference. In the text above, the values around fame and fortune are downplayed in favour of other values: the honesty of making a good game, the rush in entertaining others, the joy of being on the team, the stimulation of the creative process (see also O'Donnell, 2009). Like McLeod et al.'s (2011) advertising creatives, developer Ted Brown's remark about Mario Bros. designer Shigeru Miyamoto illustrates that the industry is highly self-referential and that status is earned through exemplary work according to the peer group. Given the public nature of game successes and

failures, it fits that these signal expected standards to the community and push all members toward the shared sense of better or more innovative work.

Returning to the example of John's blog provides additional examples of boundary and social identity. The last person to comment on this forum, Alan Jack, says that 'technically, games are the oldest and most primal of communicative media'; he references ancient Mayan and Egyptian games and links video games to this legacy. This can be interpreted as an example of Van Maanen and Barley's (1984) notion of responsibility to others insofar as VGDs hold a commitment to the symbolic nature of games as central to human civilization. This also ties to Trice & Beyer's (1993) requirement of the shared ideology of the social value of the work tasks performed by the community. In the context of a continuing struggle to gain legitimacy with society, these comments can be interpreted as an attempt by VGDs to promote their craft as a unique and valuable art form. This in-group 'boosterism' solidifies common positive identity and further builds the boundary wall.

To this point, the paper argues that VGDs show sufficient characteristics of occupational boundaries, social identity, reference group, and social relations to be considered an OC. Yet, it might be necessary to further problematize this classification. There are themes in the data that suggest that the community may be multi-faceted or have a changing face.

Layering and evolution of an occupational community

In addition to providing a definitional framework, Van Maanen and Barley (1984) introduce the connection between occupational self-control and the formation of occupational communities. OCs can represent the tension and competition between rational and administrative control (i.e. from employers) and forms of communal control that is exerted through the social relations of the occupational group. Despite their boundaryless careers, VGDs still enter into employment relationships that can either mesh or collide with the values of their OC (see Campbell, 2014). Indeed, in the video game industry – as partially evidenced by the job advertisements presented above – many of the norms of the OC are at various times reinforced, colonized, and perhaps even created by the organizational/industry cultures and by game culture itself. As well, the voice of the OC need not be consistently unified; members engage in individual and collective sensemaking activities (Weick, 1995) as they define who they are within the communal and administrative control structures of their own studios, within the game industry, and within the broader societal context of their work.

This shifting ground and the contestation of traditional norms held by the OC is apparent in online spaces as the VGD community openly discusses occupational self-control, issues of poor working conditions, the necessity of crunch in game development, and the possibility of unionization. It is also apparent as VGDs grapple with societal critiques of video games – that they are violent and hypersexualized, and aggravate conditions such as childhood obesity, aggression, and attention deficit hyperactivity disorder. There is also online debate about the hierarchy of game genres, the derision often afforded to casual games versus big budget 'AAA' titles, and the artistic merit of mainstream versus independent games (see Bowen Martin & Deuze, 2009). From the analysis conducted for this paper it can be concluded that some game developers make work choices that reflect their own personal values. For instance, some choose

to be self-employed to have more control over the content of their work; some work in educational games where the hours seem more stable; some choose not to work at studios that create violent games. As well, some developers are vocal about particular issues, such as the characterization of women in games. The values behind these choices and sentiments are potential areas of contestation within the OC of VGDs as they challenge the existing norms and attitudes about what it means and what it takes to make great games.

There was further evidence of sub-grouping within the OC vis a vis occupational specialty. For instance, some sources highlighted the particular language and ideological divides between programmers and artists and also between those in ‘core development’ and those who do the quality assurance testing. As argued by Cohendet and Simon (2007), the workers who contribute to a video game project represent individual “communities of specialists” (i.e., programmers, artists) and despite the project-based orientation of the work, they tend to draw more from their sub-group. It is beyond the scope of this paper to further disentangle this layering; indeed, it may be that the communities of specialists identified by Cohendet and Simon are communities of practice nestled within an OC. This does not preclude all members from then belonging to the greater OC of game development, but it warrants further attention to understand the multiple and perhaps nested collectives to which individual game developers may belong. Indeed, these internal debates and delineations need not detract from the argument of the OC for VGDs, rather they act to illustrate the boundaries of the community and the factors that reaffirm belonging or signal otherness. As with other socially constructed groupings, the boundaries of this OC are permeable and members can be transient. They are organic living entities that cannot be forced (Thompson, 2005) and can be continuously reconfigured (Marschall, 2012: 31).

Conclusions

Workers with a project-based labour process have a lesser sense of organizational identity than those in long-term relationships with a single employer. Workers in cultural and technical industries experience boundaryless careers where their identity and supports are drawn from places external to their employers. To better understand the working experiences of these individuals, there has been a call to return to the occupation as the nexus for worker collectivity (Barley & Kunda, 2006). As in pre-industrial times, it may now be the trade or the craft which forms the defining environment for workers. It is within their occupational community that workers find networking and career support, communities of practice and learning, shared identity and meaning.

This paper adds to the literature that seeks to define specific occupational groups as occupational communities. In particular, it focuses on the work of video game development. As workers, VGDs are an understudied group. They present an interesting case because they sit at the intersection between ICT and cultural entertainment. A secondary analysis of online sources concludes that VGDs meet the characteristics of an OC (Van Maanen & Barley, 1984; Trice & Beyer, 1993). They have a clear set of social boundaries which define insider status, they take their identities from and are highly involved in the work of making games, they internally self-reference, and their work and leisure time is blurred through their hobbies of video gaming and the constraints of their working hours.

This research is valuable in a number of respects. It strengthens the theory of OC by extending it to an under-studied group. It provides a rare example of an OC that extends beyond geographical boundaries; most studies of OC have been geographically bound to one workplace or region. Though full treatment was out of scope for this paper, this research also begins to showcase a quest for self-control and a continual redefinition of community norms through examples of contested ground and sub-groups within the OC. Understanding video game developers as an OC is also important to future study of this group because it situates meaning within the workers and can be used to understand both alignment with and deviations from supposed organizational, industry, and societal norms. An occupational lens could help to frame the understanding of issues such as: career trajectory, learning and information sharing, industry maturation and the development of managerial capacity, the under-representation of women, citizenship at work, and response to the labour process.

The method employed in this research was unique and well-suited to the research question, but it has limitations. While an analysis of online secondary material allows for an unadulterated view into the community, it remains subjective. The data may suffer from self-selection bias where only those with extreme viewpoints take the time to speak out. However, the degree of this bias would be similar to that found in non-random survey or interview research. Indeed it could be argued that the relative or absolute anonymity of the internet empowers minority voices as much as it amplifies dominant ones. Further research is needed in this area to: 1) corroborate the findings using different methodological tools; 2) examine the sub-groups that may exist within the OC of VGDs; 3) examine the intersection and impact of the VGD OC with the extended industry community (i.e. industry critics, reporters, fans)ⁱⁱⁱ; and 4) apply the lens of the OC to an understanding of the collective responses of this occupational group to workplace challenges.

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Notes

ⁱ This blog is The Human Story posted under the tagline EA_Spouse: <http://ea-spouse.livejournal.com/274.html> (see also Peticca-Harris, et al., forthcoming)

ⁱⁱ Post-mortems are behind the scenes deconstructions of the making of a particular game. Many studios conduct these informally following the release of a game, but for popular titles they are often formally written and published.

ⁱⁱⁱ This could be particularly interesting given the recent #GamerGate social media movement