

A Gameroom of Our Own: Exploring The Domestic Gaming Environment

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Digital gaming plays out within different environments—from arcades to virtual worlds to the family living room. Each of these gaming environments offer different constraints and affordances for gaming. As gaming environments change, so do the kinds of games people play, the populations of gamers that gather, and the social interactions surrounding gaming. In this paper, we explore the domestic gaming environment. We examine data that suggests that the domestic environment is now the most common environment for gaming. We characterize existing domestic gaming environments and contrast these gaming environments with participants visions of their ideal gaming environment; these findings suggest that the participants in this study wanted gaming environments that would embody a technologically mediated hospitality.

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1. INTRODUCTION

The most crucial task before us is... imagining and creating digitally mediated environments for the kinds of lives that we will want to lead and the sorts of communities that we will want to have (Mitchell, 1997).

Digital gaming plays out within different environments—from arcades to virtual worlds to the family living room. Each of these gaming environments offer different constraints and affordances for gaming. As gaming environments change, so do the kinds of games people play, the populations of gamers that gather, and the social interactions surrounding gaming. As gaming environments change, the nature of gaming, itself, changes.

Our particular interest is in the domestic gaming environment, where, for example, game consoles may be brought into the living room and added to the assemblage of technologies comprising a home entertainment center. Games may be displayed on the home television and played by small groups of friends or family members. As gaming moves into these types of domestic environments, we have an opportunity to better understand how people integrate (or want to integrate) gaming into their lives and living environments. Unlike arcades or virtual gaming environments which are largely

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constructed by business owners and professional designers, the domestic environment is more significantly fashioned by the people who live there—including gamers, themselves. Gamers have an opportunity to create their own digitally mediated environments—be it constructing a special-purpose gaming space or appropriating and re-purposing an existing room—and from them, we can learn more about the kinds of digitally mediated lives they want to lead and the role that gaming plays in those lives.

In other words, we are interested in understanding more about the relationship between domestic gaming spaces and domestic gaming places (Harrison & Dourish, 1996). This distinction is important. The domestic gaming space involves the socially constructed “geometrical arrangements that might structure, constrain, and enable certain forms of movement and interaction” (Dourish, 2006), such as the positioning of furniture in the room or the accessibility of gaming peripherals. The domestic gaming place, in contrast, involves “the ways in which settings acquire recognizable and persistent social meaning in the course of interaction” (Dourish, 2006), such as a basement used for gaming that becomes understood to be the party room.

In this paper, we offer the following contributions:

- We present a literature review of research on gaming in the numerous different environments in which gaming has played out—including arcades, virtual gaming environments, LAN parties, third places, and the domestic digital hearth. We focus, in particular, on gaming’s social dimension in each of these environments.
- We identify the environment that is now reported as the most common location for group gaming—the domestic environment—and describe the domestic spaces in which groups of gamers currently gather to play. We contrast these existing spaces with gamers’ ideal gaming environments.
- We identify the two most prominent features of the ideal gaming environment—size and versatility—and we discuss the ways in which these features of gaming spaces point to the role that gaming plays in participants’ constructions of domestic hospitality and their constructions of gaming places.
- We explore the synergies and contrasts between the gaming environments described in related work *versus* the domestic gaming environments studied in this research. In particular, we emphasize the similarities between the role of the

‘third place’ in communities and the kinds of ideal gaming environments people want to create within their homes.

2. GAMING ENVIRONMENTS

In order to better understand the domestic environments in which much of group gaming currently takes place, we first examine other environments in which gaming has typically played out—including arcades, virtual gaming environments, LAN parties, third places, and the domestic digital hearth. Because of the socially-constructed nature of both spaces and places, we pay particular attention to the relationship between gaming and sociality in these various environments. This literature review sets a broader context for an exploration of group gaming environments and will enable us to return to the themes laid out here and to examine the resonances and contrasts between existing and ideal gaming environments and the other kinds of environments in which gaming has previously been experienced.

2.1. Arcades

The first arcades, which were not originally digital, emerged at the beginning of the 20th century. They offered an opportunity for “city folk” to enjoy “mechanical wonders” such as peephole machines that had previously “been locked away in the laboratories of electrical wizards” (Nasaw, 1993). While the technical sophistication of these mechanical wonders may have changed in the evolution from peephole machines to Pac Man, people’s fascination with the wizardry within the arcades did not. Video games held a remarkable kind of power over people; gamers responded to the machines in a social manner, talking to them and imbuing them with personality and gender (Loftus & Loftus, 1983).

While arcades may look like places where people gather together to enjoy a shared pastime, closer investigations reveal that, for gamers, the primary form of interaction in the arcade was not necessarily human-human interaction. Arcades did function as environments that attracted economically- and racially- diverse groups of male teenagers (Herz, 1997). Yet researchers have found that the social interactions in arcades were more commonly between human and machine rather than between human and human (Loftus & Loftus, 1983). In arcades, games were the necessary “other” for socialization; people played an optional, secondary role.

Playing video games can involve an entire social experience.... And yet the social experience of a video arcade, while not incompatible with the presence of human friends, doesn't require them either (Loftus & Loftus, 1983).

The social norms of the arcade stipulated that most communication would only occur between gamers and machines. A gamer could also converse with his most immediate friends but other conversation was largely taboo (Surrey, 1982).

In the arcade, the most common form of interaction with others played out in performer–audience relationships: “Players are not encouraged to interact, except as a spectating and appreciative crowd” (Burrill, 2008). Women, if they were present in the gaming environment at all, were relegated to the role of audience members and cheerleaders (Surrey, 1982).

While male teenagers (by and large the patrons of arcades) hung out in arcades for the same reason that previous generations of teenagers hung out at drive-ins and that people in other generations hung out in bars and cafes—for social companionship—there is a significant difference between these environments (Loftus & Loftus, 1983). In arcades, interaction with the games, not the people, was the primary form of social engagement. In fact, the space of the arcades in between machines was deemed meaningless enough by other researchers that it has been referred to in as the research literature as “nowhere” (Burrill, 2008). Burrill has argued that “one does not ‘hang out’ in between machines, there is nothing to do in ‘nowhere.’” Similarly, Herz has characterized arcades as being a transitional space, serving primarily to move people from the physical world to the virtual world of the games:

People assembled and spoke to each other, but it was the same kind of glancing interaction that takes place in train stations and airports, where everyone is en route. In the arcades, everyone was en route from the physical world to cyberspace. Every videogame cabinet was a gate from one world to the other... (Herz, 1997).

In the economically- and racially- diverse social setting of the arcades, then, human-human interactions played out most commonly in the context performer-audience relationships. However, the primary social experience of gaming in arcades played out in the relationship not between human and human but between human and machine; the virtual gameworld within the machine seemed to be more important than the physical world in which other people were present.

2.3. Virtual Gaming Environments

With networked gaming, the virtual world of the game no longer was restricted to the human and machine; other people dialed in. Virtual gaming environments such as Multi-User Dungeons (MUDs), networked multiplayer games like *Doom* and *Quake*, and, more recently, the massively multiplayer online games like *Star Wars Galaxies* and *World of Warcraft* simultaneously allowed a greater physical distance among gamers while facilitating more in-game human–human interaction.

Dialing into networked *Doom* rooms and online game sites, you're going the other way—navigating virtual space to get back through to real people. You're playing videogames from the inside out against people whose real names and circumstances you may never know (Herz, 1997).

In virtual gaming environments performer-audience relationships continued to play an important role (Ducheneaut, 2006). Reminiscent of the culture of physical arcades, Ducheneaut et al's study of gamer interaction in *Star Wars Galaxies* suggested that some gamers valued the experience of playing “alone together.” That is, gamers valued the ability to play independently but alongside other gamers. In this way, other gamers could provide an audience and a sense of “social presence” to one's gameplay.

Some virtual games were designed explicitly to foster even richer forms of social interaction among gamers—creating interdependencies among characters (Ducheneaut & Moore, 2004), raids that were too difficult to undertake alone (Muramatsu & Ackerman, 1998; Nardi & Harris, 2006), and clans or guilds for group association (Ducheneaut, Yee, Nickell & Moore, 2007; Muramatsu & Ackerman, 1998; Nardi & Harris, 2006; Williams, Ducheneaut, Xiong, Zhang, Yee & Nickell, 2006). Some studies of virtual games suggest that some of these virtual gameworlds (or particular locales within these worlds) have successfully fostered sociability and might be considered analogous to Oldenburg's *third places* (1999, see Section 2.4), i.e., a public place in which people gather, like a virtual neighborhood bars for gamers (Ducheneaut, Moore & Nickell, 2007; Williams, Ducheneaut, Xiong, Zhang, Yee & Nickell, 2006).

However, other studies of virtual games have found these virtual gaming environments to be more social than sociable, i.e., spaces where people gather but where they do not necessarily reach out to be friendly towards others (Muramatsu & Ackerman, 1998; Ducheneaut & Moore, 2004). When players were required by the game to engage in social activities, sometimes these proscribed activities became rote and impersonal,

overshadowing the more sociable interactions that they could have fostered—the informal conversations and building of friendships.

Finally, in a few instances, likely the exception rather than the rule, researchers have documented instances in which friendships did not need to be built online because they already existed—friends and family members in real life met up online to play virtual games together (Muramatsu & Ackerman, 1998; Nardi & Harris, 2006). Here, gaming provided a virtual venue for extending existing real world relationships, suggesting a more interesting and complex relationship between sociality in the virtual and physical worlds.

2.3. LAN Parties

Gaming more explicitly spans the virtual and physical in LAN parties, gatherings in which gamers bring their own computers, connect them via a local area network (the LAN in LAN Parties), and engage in sustained gameplay, most predominantly multiplayer first person shooters (Jansz, 2005; Swalwell, 2003). Like the gamers who inhabit arcades, gamers who participate in LAN parties are typically single, young men (Jansz, 2005).

One motivation for participating in LAN parties is very pragmatic: the gaming experience is vastly improved due to the low latency of local area networks compared to that of cable or DSL connections over which gamers would otherwise have to connect from their distributed home settings:

If you try and play this on internet servers, it's like you move and then it stops and you wait while the connection [catches up]. Then you're already dead by the time it catches up—so there's no point playing (qtd. in Swalwell, 2003).

Yet, surveys of LAN'ers (participants of LAN parties) have found that the sociality of the event is the primary motivation for attending. Jansz further speculates that the sociality afforded by collocated gameplay might help to justify the great effort that all LAN'ers expend in order to participate—moving computers and displays, paying entrance fees, and enduring “rather primitive overnight facilities” (2005). Here, the spatial manifestation of the LAN party is influenced both by social motivations and the importance of the emergent place to its inhabitants.

The importance of sociality at LAN parties is also evident in the language that LAN'ers employ to talk about gamers who only play online. One of Swalwell's informants implied that those gamers were anti-social and referred to them as "lamers":

LAN'ers see each other face-to-face quite often and get to know each other. From a LAN'ers point of view, if you just lock yourself in a room and play games on the net and not get out and LAN then that's lame (2003).

Additional research on LAN'ing also emphasizes the kinds of social interactions that occur at LAN parties. In contrast to arcades, where the space between machines was described as "nowhere," the space between machines at LAN parties is much more infused with sociability:

The games themselves do not define the limits of the LAN party, as players on break socialize between the rows of computers; exchange software, music, and films; drink in the bar; smoke outside; and engage in a host of other embodied practices normal to human sociability (Simon, 2007).

Indeed, none of these researchers drew connections between LAN parties and the gaming that transpired in either arcades or virtual gaming environments. Instead they found resonance between the social context of gaming at LAN parties and the social context of other, non-digital forms of gameplay with longer-standing social histories:

In this way it resembles older forms of gameplay more than it does other online groups or "communities," in cultures where there is life on the streets, where public space is not just traversed but lingered in, and where games have long been played publicly, animating parks and piazzas, the sites of meeting and exchange broadly conceived (Swalwell, 2003).

2.4. Third Places

Third places are any number of "public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" (Oldenburg, 1999). Neighborhood cafés and bars are quintessential third places; there, people gather and connect other people with their community. Third places are primarily environments for socialization but they often include gaming activities such as pool or darts and sometimes, as in the case of pool halls, are designed around gaming activities (Oldenburg, 1999).

One ethnographic study of a third place, a bar, in the southwestern United States identified two types of "regulars": drinkers and gamers (1987). Gamers inhabited the space not at, but immediately surrounding the bar (which was the turf of the drinkers). The gamers' turf included shuffleboard, pinball, and backgammon. Regular gamers in

this particular bar never played pool because it was in a separate room and wasn't amenable to the kinds of social interaction the gamers preferred. Here, even regular gamers prioritized socialization over the choice of games in their third place.

Oldenburg suggests that the conversations that are held in third places are a type of game, themselves; and not all games mix well with these conversational games (1999). When games do not mix well with conversations, Oldenburg suggests that those games detract from the characteristic third-place-ness of the space.

As there are agencies and activities that interfere with conversation, so there are those activities that aid and encourage it. . . . Not all games stimulate conversation and kibitzing; hence, not all games complement third place association. A room full of individuals intent upon video games is not a third place (Oldenburg, 1999).

For both Oldenburg and the regular gamers of the bar in the southwestern U.S., a game's ability to support and foster sociability is the key determinant of whether that game plays a legitimate role in the third places that help hold communities together.

2.5. The Digital Hearth

Oldenburg observed that some games, such as pool, have migrated from third places (e.g., pool halls) into domestic spaces (1999). Instead of gathering in public spaces to play games, many people increasingly gather in private homes. Researchers in North America and Australia have found that the gaming in the home has its locus in the living room, becoming part of the new "digital" hearth that radiates "information instead of heat":

Just as the fireplace with its chimney and mantel was the focus of a traditional living room, and later became the pivot point for Frank Lloyd Wright's box-busting house plans, so the display—the source of data, news, and entertainment—now bids to become the most powerful organizer of domestic spaces and activities. In most rooms, it's what most eyeballs are most likely to lock onto most of the time (Mitchell, 1997).

Cultural histories of the living room are articulated through the changing place of the domestic living-room hearth. Etymologically, hearth is derived from the Latin for focus, and, over time, the focus of the gaze has shifted from the fireplace to radio, to television and now to games console (Flynn, 2003).

The digital hearth, however, is a highly politicized place (Mitchell, 1997). Some futurists such as Alvin Toffler characterize the digital hearth in a more idealized way as a cozy space that will "glue the family unit together again" (1980). In dramatic contrast,

other futurists argue that the migration of digital technologies into the home will eliminate the boundaries between work and the home, prevent people from getting away from work, and relegate women back into the home (Robins & Hepworth, 1988). Further, Forester suggests that there are significant psychological casualties implicated in the increased use of digital technologies in the domestic environment (1988).

Empirical studies of domestic console gaming suggest that families' experiences of the digital hearth are not particularly well explained by these more extreme positions. Flynn's study of console gamers in Australia found that console gaming in the home is largely a social activity: gamers play console games with collocated friends or family members; gamers play single-player games while simultaneously talking with friends on the phone; and gamers play games while others are in the room engaged in other activities, all while intermittently holding conversations with one another (2003). However, Flynn's research also suggests that the multi-functional nature of the living room presents a problem as gamers and others must constantly negotiate for use of the space. Because of the many activities that many people want to be able to carry out in the living room, Flynn found that the digital hearth was a "contested" space (2003). This single domestic space actually serves as the setting for multiple—and perhaps competing—places, each imbued with different meanings, values, and social norms.

Sall and Grinter studied gaming in the home, as well, with an emphasis on physical games—games that use physical movements (beyond the twitch of fingers on a handheld controller) for input, such as *Dance*, *Dance Revolution*, *Taiko Drum Master* and *Guitar Hero* (2007). Sall and Grinter echoed Flynn's finding that the living room is a multi-functional space and noted that physical games, in particular, place greater spatial demands on this already "overloaded" space because they require much larger input devices (e.g., floor mats and drum sets) than handheld controllers. Sall and Grinter found that the motivation for engaging in physical gaming in the home was largely social, whether that meant getting together with housemates, inviting friends over to play, or practicing by one's self in preparation for playing in other social contexts.

In our own studies of domestic console gaming, we found that participants were much more comfortable with the physical presence of gaming in the social center of the home than in the work of either Flynn or Sall and Grinter (Volda & Greenberg, 2009). To some degree, this shift may be the result of a number of more recent technical innovations in gaming, including:

- (1) input devices that connect to the console via Bluetooth, eliminating cord clutter in the environment and allowing gamers to play farther from the console than was previously possible when using corded input devices (e.g., while sitting on the sofa), and
- (2) input devices that utilize accelerometers and infrared positioning sensors (e.g., Wiimotes) to more flexibly respond to a variety of physical inputs, reducing the number of specialized input devices required by different games.

We also found that console games served as a social hub for diverse groups of gamers—diverse in generation, expertise, and interests (Volda & Greenberg, 2009). Console gaming was one activity in which these diverse groups could all engage and spend time together. While not all participants particularly enjoyed the gaming activity or felt competent at gaming, they all enjoyed being able to spend time doing something with the people in their lives who mattered to them.

In the domestic digital hearth, sociality may be the primary motivation for gaming, but because gaming plays out in the primary social spaces of the home, it also plays out in fundamentally multifunctional spaces—spaces that support multiple places. Unlike the bar as third place, in which there were two types of regulars—drinkers and gamers—each with their own turf, in the domestic digital hearth, gamers and non-gamers all used the space for numerous other activities in addition to gaming.

2.6 Summary

From the cross-section of research literature that engages the relationship between gaming spaces and the sociality of gaming, it seems clear that the environments in which gaming plays out and the sociality of gaming have co-evolved. But with the movement of digital gaming into the domestic environment, we've seen the first significant movement of gaming into a space in which gamers have legitimate control over the design of their gaming environments. It may also not be a coincidence that this movement of gaming into the domestic environment has also coincided with a shift in the demographics of gamers, 40% of whom are now female and 26% of whom are over the age of 50 [Entertainment Software Association, 2009].

As gaming moves into an environment in which gamers have more input into the space and the way in which gaming fits into and plays out in that space, and as a more diverse demographic of gamers has input into those things as well, it behooves us to

better understand, as Mitchell suggests, the kinds of “digitally mediated environments” people want for “the kinds of lives that [they] will want to lead” (1997). What kind of digitally-mediated gaming environments do people want? In what ways are these environments similar to or differ from the kinds of gaming environments people play in now? What kind of lives do people want to lead in these environments? What values, what visions of the self and community are inscribed in these gaming environments? These and other questions are explored in the remainder of this paper.

3. DIGITAL GROUP GAMING ENVIRONMENTS: RESEARCH METHOD

To explore questions about digital group gaming environments and the kinds of lives people want to live in these environments, we conducted a mixed-methods study of group gaming, recruiting 36 participants who belonged to 12 groups that gathered regularly to play video games. We recruited participants on a variety of gaming platforms; all participants who responded to our advertisements, however, gathered together to play console games. We were surprised that we did not hear from gamers who gathered together to play either networked handheld games (see also (Szentgyorgyi et al, 2008)) or for LAN parties. Many of the participants in our study also reported group gaming on these other platforms; however, their most common gaming platform was typically the console. While we believe the extreme predominance of console gaming groups is indicative of the prevalence of this platform for group gaming, we do caution that the results of this research should not be generalized beyond the context of groups that gather together to play console games.

We carried out this research in whatever setting the groups typically gathered to play games. All groups in this study gathered in residential settings—living rooms, family rooms, basements, or the shared common areas of retirement communities. Participants engaged in four research activities:

1. **Questionnaire.** Participants completed a questionnaire that asked about their previous experiences with various game genres and platforms as well as types of locations in which they had previously gathered with others to play video games. Participants also reported demographic information such as sex and age.
2. **Group gameplay.** Participants gathered in groups of friends or family who regularly get together to play games. These existing groups played the game or games that they typically play with one another for anywhere between

thirty minutes and two hours (an hour and fifteen minutes, on average). We observed groups play a variety of games on a variety of console gaming platforms and documented features of the environment in which groups played. Descriptions of the gaming groups and a list of the games that were observed are reported in Table 1.

3. **Gaming environment sketch.** Participants sketched their ideal group gaming environment. This activity was modeled after the sketching task suggested by Sall and Grinter (2007).
4. **Focus group.** Individuals participated in a semi-structured focus group with other members of their gaming group. The focus group protocol included questions about the gaming environment sketches, motivations for getting together to play games, and gameplay preferences when gaming in various contexts.

In this paper, we examine a subset of this data that speaks to the environments in which gaming happens. We focus our analysis on the way in which gaming is currently (and would ideally be) situated within the domestic context, that is, how features of the space influence the creation of the place and vice versa. From the questionnaire data, we employ descriptive and inferential statistics to analyze the results of one question in which participants reported on the various types of locations in which they have gathered with others to play video games. From the group gameplay data, we explore sketches drawn in our fieldnotes to better understand the spaces in which people gathered to play console games; we analyze these data primarily by counting salient features of the space (e.g., the amount of seating in the space) and computing averages across gaming groups. We examine the ideal gaming environment sketches along with the portion of the focus group in which participants described their ideal gaming environments and discussed their rationale for designing gaming environments in the way that they did. We analyze the focus group data using inductive analytic techniques, generating open codes for the concepts that emerged during the focus group and then triangulating the themes that emerged during open coding with the sketches to provide a degree of validation for our analysis.

This analysis extends our previous work in a new and complementary direction. In previous publications we analyzed different subsets of data from this study. Elsewhere,

we analyzed the second portion of the focus group data (following the discussion of ideal gaming spaces) to characterize motivations and preferences for group console gaming; this analysis revealed the significance of the diversity within gaming groups as well as the impact of this diversity on choices about gameplay (Volda & Greenberg, 2009). Previously, we also analyzed our video data of groups' gameplay to characterize relationships between console games and the dynamics of gaming groups. This analysis foregrounded two classes of gaming practices—one class of practices, including trash talk and turf wars, that emphasized the individual gamer and another class of practices such as self-sacrifice and the reinforcement of shared histories that emphasized the gaming group as a whole (Volda, Carpendale & Greenberg, 2010). Finally, we also took a more focused look at the subset of our data related to intergenerational gaming, including a portion of our questionnaire in which participants reported on the different generations of their gaming partners as well as video data from the four intergenerational gaming groups in our study. Our analysis there revealed the scope of intergenerational gaming and the extent to which gaming fostered a wide breadth of role-relationships between gamers in different generations (Volda & Greenberg, in press).

3.1. Participants

Our participants included 36 individuals, members of 12 different groups that gathered regularly to play console video games. We recruited participants in the context of both inter- and intra-generational gaming groups: three groups of all youth participants, three groups of all adult participants, two groups of all elder participants, and four groups whose participants spanned multiple generations (Table 1). Youth participants ranged in age from 3 to 15; adult participants, from age 26 to 41; mature adult participants, from age 52 to 59; and elder participants, from age 68 to 84.

Although we specifically contacted retirement communities to recruit groups of elder participants, all other groups were recruited via snowball sampling. We did not turn away any groups; the diversity of participants in our study was a naturally occurring result of the snowball sampling.

In all but three cases, every member of the gaming group present on the day of the observation participated in the full research design. Participants in Group F were joined briefly in their gameplay by a housemate who was just passing through the room. Participants in Groups G and H (gaming groups in retirement communities) were a subset

Table 1. Overview of participant population.

Gaming Group	Participant Demographics								Platform Observed	Games Observed
	Youth		Adults		Mature Adults		Elders			
	Female	Male	Female	Male	Female	Male	Female	Male		
Group A Siblings & their Cousin		P1–P3							Wii	Super Smash Bros Brawl Mario Kart Wii
Group B Friends		P4–P6							Wii	Wii Sports—Tennis Wii Sports—Golf
Group C Siblings	P7, P8								Gamecube	Paper Mario
Group D Couple			P9	P10					Wii	Lego Star Wars
Group E Friends				P11, P12					Xbox360	Grand Theft Auto IV Burnout Paradise Halo 3
Group F Couple			P13	P14					Xbox360	Guitar Hero III Rock Band
Group G Residents of a Retirement Community							P15–P17		Wii	Wii Sports—Bowling
Group H Residents of a Retirement Community							P18–P20		Wii	Wii Sports—Bowling
Group I Child & his Parents		P21	P22	P23					Wii PS2	Boom Blox American Idol (Karaoke)
Group J Child & his Parents		P24	P25	P26					Wii	Wii Sports—Tennis Wii Sports—Bowling Dance Dance Revolution Hottest Party Rock Band
Group K Couple & her Mother			P27	P28	P29				PS3	Rock Band
Group L Siblings, their Parents, Uncle & Grandparents		P30, P31	P32	P33, P34	P35	P36			Wii	Wii Sports—Tennis Wii Sports—Baseball Wii Sports—Golf

of larger gaming groups; these larger groups fluctuated in membership from 7 to 28 individuals. While a researcher observed the gameplay of the entire group, the activity coordinator at each of the retirement communities recommended individuals to participate in the remainder of the study based on their health and the schedule of other activities. Additionally, due to time constraints in the schedules at the retirement communities, the 6 participants in Groups G and H did not complete the gaming environment sketch; the results and discussion about ideal gaming environments that will be presented in this paper only reflects data provided by the other 30 participants.

4. DIGITAL GROUP GAMING ENVIRONMENTS: RESULTS

Here, we turn to examine three sources of data related to the environments of group gaming, both their spatial arrangements as well as the place-ful constructions of meaning in these environments:

1. Questionnaire data about the types of locations in which participants have gathered to play video games,
2. Data sketched in our fieldnotes about the locations in which participants gathered to play console games, as well as
3. Gaming environment sketches and focus group data about gamers' ideal gaming environments.

4.1 Locations for Group Gaming: Why the Domestic Gaming Environment is Important

In our questionnaire, we asked participants to indicate the types of locations in which they had ever previously gathered with others to play video games on any platform (Table 2)¹. Family rooms, living rooms, and recreation rooms—whether in one's own home or elsewhere—were the most frequently reported locations for gaming with others. Other locations in which participants reported gaming were incredibly diverse and included the following: bedrooms (both in one's own and others' homes), public social halls, arcades, classrooms, various modes of transportation (e.g., cars), outdoors, food-oriented spaces (e.g., coffee shops or cafeterias), and the workplace.

¹ The categories of locations used in the questionnaire were arrived at through pilot testing. All categories presented to participants except for an open-ended "other" category are reported here. Two participants indicated that they played in an "other" location and specified gaming sites in the workplace (e.g., a boardroom); these two similar responses are reported here under the additional category "at work."

Table 2. Percentage of participants indicating that they had gathered with others to play video games in different types of locations

Types of Locations for Gaming With Others	All Participants (n=36)	Sex		Generation			
		Females (n=16)	Males (n=20)	Youth (n=12)	Adults (n=15)	Mature Adults (n=3)	Elders (n=6)
A family room, living room or recreation room in my home	75%	63%	85%	83%	93%	100%	
A family room, living room or recreation room in someone else's home	67%	50%	80%	58%	93%	67%	17%
A bedroom in someone else's home	39%	13%	60%	33%	67%		
A public social hall or multipurpose room	31%	44%	20%		33%		100%
An arcade or LAN center	28%	6%	45%	33%	40%		
A classroom	25%	6%	40%	33%	33%		
A car, bus, train, airplane, or other mode of transportation	22%	6%	35%	25%	33%		
My bedroom	19%	13%	25%		47%		
Outdoors	8%		15%	8%	13%		
A coffee shop, cafeteria, or other food-oriented space	6%		10%	8%	7%		
At work	6%	6%	5%		13%		

Male participants reported gaming in a greater diversity of locations than female participants. Male participants ($n=20$) indicated that they gathered with others to play console games in an average of 4.20 ($sd=2.55$) different types of locations, while females ($n=16$) reported gaming in an average of 2.06 ($sd=1.77$) different types of locations. The difference between the number of locations that males and females reported having played console games was statistically significant ($t(34)=2.85, p=0.007$)².

Similarly, adult participants reported gathering with others to play games in a greater diversity of locations than participants in other generations. Adult participants ($n=15$) reported gaming in an average of 4.73 different types of locations ($sd=2.76$); youth ($n=12$), in an average of 2.83 different types of locations ($sd=1.75$); mature adults ($n=3$), in an average of 1.67 different types of locations ($sd=0.58$); and elders ($n=6$), in an average of 1.17 different types of locations ($sd=0.41$). An analysis of variance revealed a significant main effect of generation on the diversity of locations in which games were played ($F(3,32)=5.15, p=0.005$). A Tukey HSD post hoc analysis revealed that adults played in significantly more types of locations than elders ($p=0.007$); the differences among the diversity of gaming locations for other generations were not statistically significant.

While we do not have data to indicate how common gaming practices are in each of these different types of locations, the data we do have suggest that male and adult gamers are experiencing group gaming in a wider breadth of settings than many other gamers. All mature adult and elder participants as well as all but two female participants had experienced group gaming only in the context of domestic spaces or the shared social areas of their retirement communities.

These findings suggest that the domestic gaming environment, as the most commonly reported environment for group gaming, deserves more analytic attention in the research literature. For the diverse groups of gamers in this study, residential (domestic and retirement community) settings were key contexts for group gaming experiences. Indeed, all participants in this study reported gaming with others in residential settings. In the remainder of this paper, then, we focus our analysis on better understanding this critical gaming environment, in both its current and ideal forms.

4.2 The Domestic Gaming Environment

As mentioned previously, we recruited groups that gathered to play video games on any platform and in whatever environment they typically gathered to play video games. All gaming groups in this study, however, gathered to play console games in residential settings—their own family rooms, living rooms, recreational basements, or the shared common areas of retirement communities.

The nine smaller gaming groups, composed of either two or three gamers, gathered for gaming in rooms that were each furnished with two to three pieces of seating (sofas, love seats, and/or oversized chairs) accommodating an average of five (but no more than seven) individuals. All but one of these gaming spaces included a coffee table and all but two of these spaces included one or two end or sofa tables. In all but one of these gaming spaces, the configuration of the furniture was arranged around the display. In the gaming space of one two-generation family (Group J), the furniture was pushed to the side, not just during gameplay but for the entire time a researcher was present in the home.

The three larger gaming groups, (groups G, H and L) gathered to play in different types of spaces than the smaller gaming groups. Group G, in a retirement community, gathered to play in an environment with numerous round tables and lightweight, movable chairs. Gamers and audience members either sat around tables, frequently nursing a cup of coffee or tea, or pulled chairs into a loose arc-shaped configuration around the television. Active gamers always stood in the center of the arc to play. Gamers in a second retirement community and in the three-generation family (Groups H and L) played in a space that was a hybrid of these two types of configurations, combining the living room-type configuration of the smaller gaming groups with nearby dining tables and chairs for additional gamers and audience members.

Food played a prominent role in the gaming environment, present in the gaming environment for all but one group—from concurrent meal preparation in the adjacent kitchen, to pizza and beer or a bowl of gummy bears at hand on the coffee table, to pitchers of juice kept just within reach (but less likely to be spilled) behind the gamers on the sofa table.

² A test of between-subjects effects revealed that the interaction of generation and sex was not significant so we treated these two factors independently in our analysis.

Four groups explicitly organized their gaming around meals³. Group E interleaved gaming with dinner; they ordered pizza and then took turns playing and eating. For Groups G and H, the gaming activity in their retirement community was purposefully scheduled to be physically and temporally adjacent to lunch or afternoon tea in order to encourage people to gather early for the meal, socialize, and try console gaming. Group L adopted gaming as an intergenerational family activity to coincide with the weekly Sunday night dinner; family members alternated playing games and preparing dinner or setting the table.

The prominent relationship between food and gaming, we believe, underscores the fundamentally social nature of gaming in the home. Other social activities such as sharing food were interleaved with gaming both physically and temporally. The relationship between food and gaming also serves to highlight the multifunctional nature of the spaces in which domestic gaming plays out.

The arrangements of the gaming space consistently pointed to the social nature of the gaming environment: screens were placed for easy viewing by all; the arrangement of sofas and chairs afforded both easy communication and (with their orientation) a comfortable, shared view of the display; and the location of tables provided common areas for sharing food and fostering social interactions. These observations exemplify the ways in which the social nature of the place influenced the physical configuration of existing domestic spaces.

In the domestic environment, the spaces chosen for gameplay were often already constructed as social places (e.g., living rooms). As a result, the spaces in which gaming plays out may already be more amenable to this social activity. Yet, domestic spaces that were created for other purposes may not be an exact fit for gaming; some fine-tuning or re-appropriation of that space may be required.

4.3 The Ideal Gaming Environment

The ideal gaming environments drawn and described by our study participants were remarkably similar to one another (Figure 1). Given both the gender and generational diversity of our study population, we found this to be quite surprising. While some of the

³ In an additional five groups, the researcher was invited and joined the gaming group for either dinner or tea before or after the gaming. In these cases, it is difficult to disentangle the role of the meal as an enactment of the family's hospitality, as they reached out to invite the researcher into their home, with the role of the meal in conjunction with typical gaming practices.

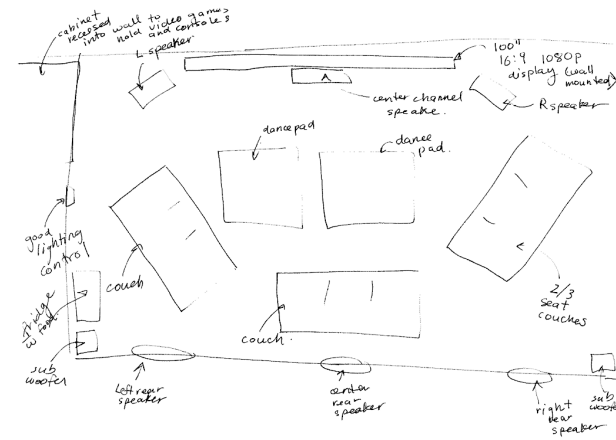
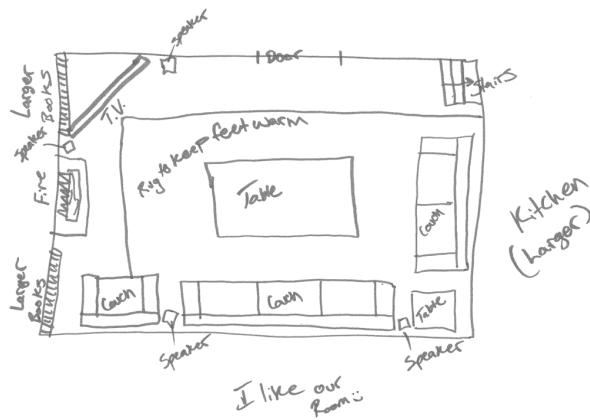
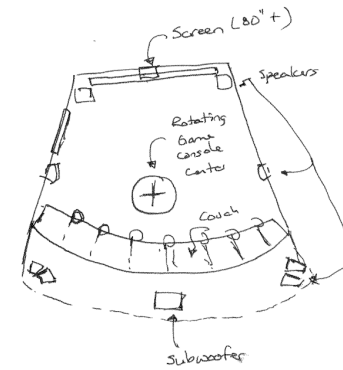
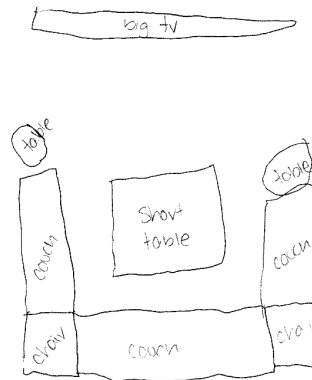
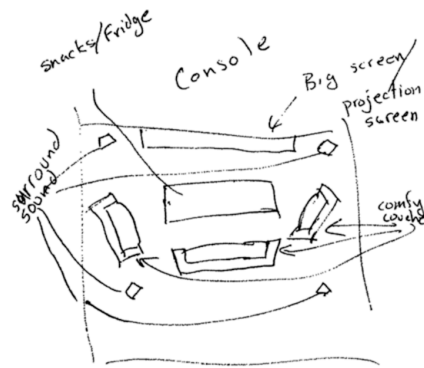


Figure 1 Ideal Gaming Environment Sketches

characteristics of these ideal gaming environments may sound somewhat unremarkable, that they were described nearly identically by both a grandmother of three young children and a couple of male teenagers is noteworthy. What follows is a representative description of our participants' ideal gaming environment, synthesized from the gaming environment sketches and focus group discussions about the gaming sketches. The broad character of the description is consistent across nearly all participants' accounts⁴; some specific details have been lifted directly from individual accounts but remain representative.

For the participants in this study, the ideal gaming space is in a large room at the social center of the home. The room is a comfortable place to spend time, with windows that can let in plenty of natural light (but with blinds that can be closed if glare becomes too much of a problem), warm area rugs, and potted plants. The furniture layout in the room is oriented around a large display that is used not only to play console games, but also to watch movies and television. The display is a large, 100-inch projection screen⁵ "so when you're playing multi-player games, everyone has a good sized chunk to look at" (P14). Storage near the large display holds three different game consoles as well as extensive libraries of console games and movies.

Facing the large display are three sofas, arranged in an arc, "amphitheatre-style" (P23). The three sofas provide plenty of seating for gamers and allow others to hang out and watch. The sofas are flanked by end tables and backed by sofa tables to provide places for everyone to put their drinks. There is a coffee table in front of the center sofa so that people can put their feet up while they are playing, set out snacks, or spread out maps and walkthroughs for the game being played. To one side of the sofas is an open space where the coffee table can be moved, if needed, out of the way of the gameplay. A mini fridge is near at hand as is a popcorn machine, to provide "easy access to junk food" (P5).

⁴ Two accounts of an ideal gaming environment are inconsistent with the description presented in this section. One such gaming space was described by a youth gamer whose doctor had stipulated that he limit his gameplay for health-related reasons; this youth gamer described an ideal gaming environment outside of the home (in the mall) where he did not feel his parents would be able to hold him to these time limits. A second such gaming space was described by a youth gamer who located his ideal gaming on an airplane (because "it would just be really fun" (P4)); while the location of the gaming environment differs, all other characteristics of this space (e.g., the physical layout) are consistent with the description presented here.

⁵ Many participants did, in fact, specify the exact size of the displays in their ideal gaming environments.

As with the existing environments that we observed, these sketched representations and accounts of our participants' ideal gaming environments provide examples of how the sociality of gaming is envisioned to influence the spaces in which gaming plays out.

5. FROM THE EXISTING TO THE IDEAL: THEMES AND DISCUSSION

While sketching their ideal gaming environments, a number of participants seemed to surprise themselves by how similar their ideal gaming environment was to their actual gaming environment: "This looks remarkably like my mom and dad's house..." (P32). Similarly, another couple looked up from their sketching to discover that they both had drawn nearly identical versions of their existing gaming space.

P10: It kind of looks like this [room].

P9: It kind of very much looks like this [room].

This same couple went on to explain that they had recently moved into their home and that they had given a lot of thought to the design of that particular space: "We both really think about the utility of the space a lot" (P10). While gaming was not the only activity carried out in the room, it was part of a suite of activities carried out there (including watching movies and playing board games). The room was designed to accommodate all of these activities. The space was not retrofit to accommodate gaming. Rather, the space was intentionally designed with gaming (among other activities) in mind.

Previous research on gaming in the home has characterized the game console as being at odds with the design of domestic social spaces, adding one more activity to an already cluttered and contested space (Flynn, 2003; Sall & Grinter, 2007). The description of the design of this family room suggests that domestic console gaming may be well-enough established and central enough to some people's household activities that as people move into new spaces or redesign their existing environments, gaming activities are taken into more intentional consideration. If existing domestic environments are now being designed with gaming (among other activities) in mind, this may account for some of the similarity between existing and ideal gaming environments.

In general, we see two primary rationales for the similarity between existing and ideal gaming spaces:

- The environments within the home that are being used for gaming are already designed to accommodate multiple social activities and can be appropriated for gaming, an additional social activity, either ‘as is’ or with some (perhaps temporary) fine-tuning, which is especially important if the space is multi-functional;
- Social environments within the home may already reflect appropriation of that space for gaming, where people have already actively (and possibly intentionally) constructed an environment that is closely related to their ideal.

The ideal gaming environments described by participants were quite similar to their existing gaming environments. While the general similarity may seem unremarkable, the two specific differences that emerged across the data in this research—the size and versatility of domestic gaming environments—together point to the significant role of gaming environments in exemplifying domestic hospitality.

5.1 The Size of Domestic Gaming Environments

Throughout the data, the most consistent distinction between existing and ideal gaming spaces was size. In the ideal gaming space, everything was bigger—the size of the display, the number of game consoles, the size of the game library, the amount of space for moving around, and the amount of seating. For example...

P32: ...the TV is much bigger and there is a lot more room to move around!

P3: Here we have the couple of games that we have. But... if you have, like, a library or something, you have lots of games. And then there’s the fact that there’s only one system here... other places could be (sic) more systems.

P5: There would need to be lots of couches that are abnormally large.

Based on the amount of seating depicted in the gaming environment sketches and, where relevant, discussion in the focus groups, participants’ ideal gaming environments supported a larger number of people than their existing spaces—an average of seven people and as many as twenty. Recall that in existing gaming environments, participants’ gaming spaces accommodated an average of five and no more than seven individuals.

P14: Yeah, we can fit a lot of people down here.

P13: So it's spacious, which is good.

Having extra room and accommodating larger numbers of people in a gaming space had universally positive connotations. More space was a "good" thing. Other features of participants' ideal gaming spaces helped support these larger numbers of gamers. Larger displays supported cooperative play by a larger number of people, particularly in instances where the game allocated a portion of screen real estate for each player. Larger displays also supported easier viewing by audiences. And finally, a larger number of games and consoles were important for supporting the varied gaming preferences of the larger number of gamers. Having a diversity of games was also one way to support versatility in the way the space was used and participants saw versatility as a key characteristic of gaming spaces for supporting larger and potentially more diverse groups of gamers.

5.2 The Versatility of Domestic Gaming Environments

Participants in this study valued versatility in both their existing and ideal gaming environments. Participants wanted to have games on hand for a variety of different types of gamers: "It really depends on the crowd... I try and have good, like, solid games for anybody who wants to come over and play" (P11). But many participants recognized that not everyone would play console games—whether these other people were watching and waiting for their next turn, whether they preferred other kinds of games, or whether they didn't want to play any games at all.

P23: You know, you can get twelve, sixteen people at your house, typically.... The group dynamics tend to be that you get groups that sort of break off and do their own little thing and whatnot. And so you don't have the full group there [gaming] anyways.

And so the participants wanted the environment in which console gaming took place to be enjoyable for people who weren't playing console games to hang out. The environments in which group gaming took place or were envisioned taking place were not spaces solely dedicated to console gaming. The participants in this study wanted their gaming spaces to be versatile enough to support other activities, as well:

P9: You can play games or read or watch a movie or just hang out and chat.

P34: ...a fun open space for family and friends to mingle and hang out, perhaps with other games like wall darts and a pool table.

Participants also valued the ability to transition more fluidly between the diverse activities they wanted their gaming environments to support. Some participants desired furniture that would be more versatile, as well, in order to facilitate reconfiguring the room between activities:

P13: It would probably be good if, like, the seats were on casters so you could wheel them around. So that you could actually configure your space if you needed to... to pull out, like, Rock Band or... Dance, Dance Revolution.

Other participants noted that technology can play an important role in making these transitions more seamless:

P10: [On our universal remote] there's a button that says, 'Play a game.' So you just push it and away you go, which is kind of nice. And then, yeah! And because of [the Wii's] wireless controllers, it's not like there's any extra setup—pulling the console out, doing this, doing that to get it going.... It's also easy to switch from games to movies if you want.... And it's good for that. And it's all done in the same space.

For these participants, the ideal gaming environment was a space that held within it an array of choices and possibilities, all situated at the intersection of entertainment and social interaction. Central to the construction of the ideal gaming environment was the sentiment that, "It's like a party room... so you could just be doing anything" (P6).

5.3 Enacting Hospitality Through Domestic Gaming Environments

With the exception of the gaming groups in retirement communities, participants gathered to play console games in relatively small groups of friends or family members. They reported that the spaces in which they played generally worked for them and their most common gaming activities. But when asked about their ideal gaming spaces, these gamers wanted gaming spaces that would work, not just for the small groups in which they typically played games, but for larger groups, "for when we have people over..." (P10). This meant that not only did they want more space to accommodate a greater number of people, they also wanted more activities to be available for people with diverse interests, for people who wanted and didn't want to play games.

Participants designed their ideal gaming environments to embody a kind of technologically-mediated hospitality. In describing their environments, they expressed a

desire that their gaming spaces be welcoming to the breadth of people that they wanted to be able to invite over. While some participants framed these encounters as “gaming parties,” more often participants wanted their domestic space to be a good place for others to come over and just “hang out.” Participants’ framing of their ideal gaming spaces were not solely about themselves and their own gaming practices but, rather, they were prominently about what they wanted the experience to be for others, even to the extent that they, themselves, might be less excited by the games that others would want to play:

P14: You say, “alright, let’s play some videogames....” For them, it’s fun, but for me, it’s just...

P13: ...something to do.

In constructing their ideal gaming environment, participants considered the image they wanted to project as hosts and hostesses in this ideally hospitable space—not imagined in bars or other third places but in the home:

It gives me a chance to hang out with others in a home setting rather than going out to a bar or restaurant. It’s a more comfortable setting that allows others to feel relaxed and open (P27).

Participants in this study envisioned ideal gaming environments that were both larger and more versatile than their existing gaming environments, and these in turn suggested a slightly different kind of place desired for domestic gaming. They believed that these larger and more versatile gaming spaces would enable them to use gaming as an extension of their domestic hospitality, providing a fun activity in a comfortable setting for larger and more diverse groups of friends and family.

6. REVISITING THE ENVIRONMENTS IN WHICH GAMING HAS PLAYED OUT

The gaming spaces that participants envisioned creating within their domestic environments, in some ways, both resonated and contrasted with each of the other gaming environments we have discussed here, including arcades, virtual gaming environments, LAN parties, the digital hearth, and third spaces. Here, we revisit each of the environments in which gaming has played out to explore the synergies and contrasts, and to better understand the co-evolution of gaming environments and the social nature of gaming.

Arcades. The distinctions between gaming as it plays out in arcades and in the domestic environment are more striking and prevalent than are the resonances between the two. One particularly noteworthy resonance, however, is the emphasis in both research literatures on the diversity of gamers that are brought together in these two spaces. The literature on arcades emphasizes the economic and racial diversity of gamers (Herz, 1997) while the domestic gaming literature emphasizes their gender and generational diversity (Volda & Greenberg, 2009). Increased diversity in the population of gamers, in any of these forms, represents a critical evolution in the nature of gaming. Additionally, both the domestic and arcade settings enabled other inhabitants to participate more peripherally in gameplay, as audience members and spectators.

In dramatic contrast, however, between arcades and the domestic environment, are the norms about social interactions in between machines. In the domestic environment, there is no “nowhere” between the machines as there is in arcades; there are no taboos against speaking to others. Indeed, in contrast to the primarily dyadic relationship between the gamer and the machine as witnessed in arcades, the gamers in this study formed a physical and social circle with each other and the console. This physical circle played out both as gamers arranged themselves in an arc during gameplay as well as was drawn in the sketches of ideal gaming environments—furniture in these sketches was generally placed in an arc in front of the display. The social circle played out as participants chatted with each other throughout gameplay and was envisioned in ideal gaming environments that would support a variety of sociable activities in and around gaming.

Virtual Gaming Environments. The sociability of domestic gaming environments is somewhat more similar to virtual gaming environments in that the gamer is surrounded by other people during gameplay. Communication between people in both virtual and domestic gaming environments is more common than communication between the human and machine, as in arcades.

In contrast, however, to Ducheneaut et al’s findings that some gamers in virtual worlds preferred to play independently but alongside other gamers, gamers in the domestic environment preferred to play collaboratively with or competitively against each other, with fates in the game dependent on others’ performances either directly or indirectly. Of the twelve gaming groups in this study, ten groups played only collaborative or competitive multiplayer games. Only two gaming groups (Groups C and E) ever took turns playing single-player games in the company of others.

And although it must be acknowledged that the genre of massively multiplayer online games is a fast-moving target, if it remains the case that some virtual gameworlds are more social than sociable, fostering interaction without encouraging informal relationships and friendliness, then here, too, is a point where the virtual and domestic gaming spaces differ. The domestic gaming environment, both in and around gameplay is a fundamentally sociable place. The rich social context that exists simultaneously alongside and in addition to the social context of gameplay differentiates the domestic gaming environment from much gaming in virtual spaces.

LAN Parties. One strong synergy between the domestic gaming environment and the environment of LAN parties is, in fact, the rich social context that exists alongside gaming. LAN'ers report that social interaction is the primary motivation for attending LAN parties. The sociability fostered by LAN parties is the key distinction, in fact, between how some LAN'ers distinguish between two classes of online gamers—LAN'ers, who attend LAN parties and are sociable, and lamers, who don't ever "get out."

One key distinction between LAN party environments and the domestic gaming environment is the demographic of gamers that gather to play. LAN parties attract a relatively homogenous demographic (young and male) that sets them apart from gaming in the more demographically diverse domestic space. It also should be noted that of all the types of gaming environments discussed in this paper, LAN parties are, in some ways, the most atypical of them all. LAN parties are staged events and most likely do not represent the typical, everyday gaming environments of the gamers who attend.

Digital Hearth. There is, unsurprisingly, a great deal of synergy between the digital hearth and the domestic gaming spaces we studied in this research. With the exception of one group (Group F) who played in a gaming-focused basement and two groups from retirement communities (Groups G & H) who played in shared activity rooms, all of the gaming spaces we observed in this research were the living room or family room spaces that are the focus of research on the digital hearth. Participants' desire for versatility in gaming environments emphasizes the multifunctional nature of the digital hearth that has also been reflected in previous work (Flynn, 2003; Sall & Grinter, 2007).

There are, however, a number of surprising distinctions between the findings of this research and previous domestic gaming research that grounds itself more explicitly in the digital hearth literature. First, the language that participants used in this study to reflect the multifunctional nature of the domestic gaming space held more positive

connotations than the language used in previous research. Previous research characterized the multifunctional nature of the domestic gaming space through language like “contested” and “cluttered” (Flynn, 2003; Sall & Grinter, 2007), whereas the participants in this research framed the multifunctional nature of the space much more positively—they wanted the space to be even more “versatile” than it already was.

In addition, previous research on digital gaming in the domestic environment has focused its analysis on how residents of a single home use their space for gaming (Flynn, 2003; Sall & Grinter, 2007). In our study, we recruited groups that most commonly gathered together to play games; a majority of our participants (24 of 36 participants comprising 7 of the 12 gaming groups) gathered to play games with others who maintained separate residences. Participants wanted their gaming spaces to serve as an embodiment of their hospitality, as they reached out to invite extended family, friends, and neighbors into their homes.

Third Places. There are a number of characteristics of the domestic gaming environment that resonate quite strongly with the third place as a locale for gaming. Both gaming environments foreground the rich interplay between informal social interaction and gaming activities. Both the domestic gaming environment and the third place have also fostered a certain degree of inclusiveness. The third place is designed as a public gathering place for the residents of a neighborhood; previous research on third spaces has emphasized the significance of third spaces in cutting across traditional class boundaries but has also acknowledged that traditional third places are often dominated by men (Oldenburg, 1999). The domestic space has fostered inclusiveness by cutting across boundaries of gender (Volda & Greenberg, 2009). And while the domestic space is certainly not a public setting, some of the groups in this study did include gaming partners who were local neighbors and not extended family members or friends from farther afield (e.g., Groups B, E, G & H). Even more striking, the language that participants used to describe their ideal gaming environments, of wanting to create a comfortable place for people to come and just “hang out” and chat, is evocative of the role of third spaces in a community.

Oldenburg does, however, raise a few concerns about gaming and third spaces that must be addressed. Oldenburg has been fairly clear that “a room full of individuals intent upon video games is not a third place” (Oldenburg, 1999). The video games to which Oldenburg is likely referring, however, are not modern day consoles with collaborative,

multi-player games, won through focused gameplay that relies on interactions with other gamers. The video games to which Oldenburg is likely referring are previous generations of video game cabinets that blocked out light though physical partitions that also kept out other people. To the extent that games inhibit social interaction, we agree that groups of people intent upon video games is not evocative of a third place. Yet none of the gameplay we observed in the domestic space was devoid of social interaction in the way that Oldenburg is rightfully concerned about here.

Oldenburg raises another concern about the viability of relocating gaming activities into the home, however, and this concern is based on observations of the relocation of pool from the pool hall into the home:

The fate of the pool hall is particularly informing. To a major extent it has been, like the bar, transported into the home.... The men discovered, however, that the atmosphere of the pool hall cannot be purchased as easily as the basic equipment of the game. At parties, too many want to play; nobody gets to play enough; female guests must be allowed their turn; skill differentials are either irritating or embarrassing, depending on the player's skill or lack of it. Other than at parties, the table is not used. Friends are not available to the extent assumed (especially without their wives) nor, in truth, does the owner's family situation allow for frequent invasions of the home. Playing pool with one or two members of the family soon becomes boring, and the pool player finds himself in a bind.... Pool has been brought home and the husband with it, but his friends and the culture of a male place have been left behind (Oldenburg, 1999).

This valid cautionary tale compels us to question whether and to examine the ways in which the culture of contemporary console gaming may be distinct from that of the pool hall. A greater number of multi-player games for the console allow a greater number of people to play. Console games played on large displays also allow for greater spectator involvement in gameplay than would be possible in traditional arcade games. Females must still be allowed their turn, as must children and parents and grandparents. But the gender and generational demographic shift in console gaming fundamentally challenges the male dominated status quo of pool playing in Oldenburg's comparison. Whether friends can come over as often as expected is still an important question, although, when the people one plays console games with are more diverse, gaming activities are no longer constrained to times when only one's male friends can come over. The atmosphere of the pool hall, for example, is certainly not the same as the atmosphere of the home, but when friends, neighbors and family members do, indeed, come over to hang out around

console games, has something closer to a third place (or at least somewhat evocative of a third place) been achieved?

Finally, Oldenburg has argued that...

America does not rank well on the dimension of her informal public life and less well now than in the past. Increasingly, her citizens are encouraged to find their relaxation, entertainment, companionship, even safety, almost entirely within the privacy of homes that have become more a retreat from society than a connection to it (Oldenburg, 1999).

We do not wish to dilute or misuse the construct of a third space by arguing that people are creating third spaces in the home. The question to ask, then, should not be: "Have people, through domestic console gaming, constructed third places within the home?" For according to Oldenburg's definitions, the third place must be a public space in which diverse members of the community are welcomed. And the home will never be an entirely public space. Instead, the question to ask may be: "Have people, through domestic console gaming, reached out from their homes to create more of a connection to their community?" And the answer seems to be that through domestic group gaming, people have constructed, and desire to create, spaces within their homes that serve to reach out to others, to provide a place to hang out and play console games together. For the participants in this study, constructing a gameroom of their own meant reaching out in technologically-mediated hospitality, if not to their entire community than at least to some neighbors, friends, and extended family.

7. CONCLUSION

In this paper, we have presented the results of research examining the domestic gaming environment, both in its existing as well as ideal states. Our research has:

- Provided a review of research on the various environments in which gaming has played out including arcades, virtual gaming environments, LAN parties, third places, and the domestic digital hearth. We focused, in particular, on unpacking gaming's social dimension in each of these environments.
- Identified the environment that has been reported as the most common location for group gaming—the domestic environment. We described the domestic spaces in which groups of gamers currently gather to play and contrasted these existing spaces with gamers' ideal gaming environments.

- Identified the two most prominent features of the ideal gaming environment—size and versatility. We discussed the ways in which these two features point to the significant role that gaming plays in participants’ constructions of domestic hospitality.
- Contrasted each of the gaming environments described in related work to the domestic gaming environment, distilling out synergies and contrasts between our research and previous research on other gaming environments. In particular, we emphasized resonances between third places and the gaming environments that gamers want to create within their homes.

The contributions of this research point to the crafting of the domestic gaming space as a fundamentally social *place*, and to this social place’s complementary influence on the arrangements and configuration of the domestic *space*. Understanding the environments of gaming does not begin and end with an inventory of the hardware, software; or furniture in the space. Understanding the environments of gaming also involves understanding the meaning that is constructed through interaction in these places. Understanding the environments in which gaming plays out (and is ideally envisioned to play out) enables us to better understand the role of gaming in people’s everyday lives and the meaning that people ascribe to digitally mediated interaction.

Game designers have an opportunity, then, not only to design games that support social interaction. Game designers have an opportunity to design games that serve as an avenue for the kind of digitally mediated hospitality that the participants in this study envisioned, games that allow people to reach out to others; to invite family, friends, and neighbors into the gaming environments in their homes; and to play games together.

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