

Information Needs and Behaviors of Videogame Preservationists

Christine Reynolds

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Abstract

Three groups make up the videogame preservation community: LIS professionals, videogame developers, and hobbyist collectors. Their information needs and associated behaviors differ widely within and between each group, though their main shared goal of preservation situates them as a single entity worthy of study. This mainly online community faces many problems from how to effectively collaborate and dealing with intellectual property boundaries to navigating obstacles in digital preservation with particular focus on technological decay.

Introduction

It's easy to overlook the importance of video games. Seen often as childish and lacking cultural importance, these complex artifacts can tell us much about humanity. They act as a window into the society, time, and individuals who created them. Recently there has been a shift towards seeing these artifacts as objects worthy of collection and study (Kraus & Donahue, 2012; Sköld, 2018; Wood & Carter, 2018). There is a small, but diverse community that is deciding the fate of these artifacts; it consists of dedicated fans, LIS professionals, and game industry personnel (Kraus & Donahue, 2012; Olgado, 2019).

Over the past decades these three distinct sub-groups have been having a discussion around the correct way to preserve this history. Considering them an information community seems straight forward enough. After all, their work revolves around the collecting, organizing and preservation of a type of information document! Their pursuit puts them squarely in the Christensens & Levinsons instrumental angle (2003). It is a massive endeavor that can't be done alone. The mere act of searching can evolve collaboration via asking strangers on the internet if they have access to certain files, to finding ways that the collective might standardize cataloging practices (Mora-Cantalops & Bergillos, 2018; de Groat, 2015).

In looking more formally at Fisher and Bishops requirements we can see this community shine in a few different ways. There are many examples of the community collaborating on assorted projects based around different games or genres. Take for instance the Omniarchive Community(<https://omniarchive.org/>), that specifically works to find all official versions of Minecraft content, or the Internet Arcade(<https://archive.org/details/internetarcade>), a sub-group headed under archive.org that collects and emulates versions of older arcade games.

Another way video game preservationists excel in the role of an information community is in their adept use of emerging technologies towards their pursuit of information and its dissemination (Fisher & Bishop, 2015). They are primarily a virtual community, mostly relying on collaborative information-oriented behaviors as outlined by Burnett. These include textual discussions that occur through websites and messaging apps, and specifically embody his descriptions of community directed questions and group projects (2000). While some members may meet in person, gathering at a library, museum, or game dev office, they still employ technology during the collection and preservation of games.

Like any community, they have their own issues. Olgado points to how these power dynamics that are inherent in the positions that each group holds in the larger society can turn into problems for the community. Fans and hobbyist collectors have been dedicated to this goal the longest and provide unity of purpose for the larger group. However, they lack the funds, institutional structures and knowledge that the professionals bring to the table. The most obvious example of how this unbalanced power wreaks havoc for the community is when larger game companies derail fan projects based on intellectual property concerns. This tension can be a limiting factor in how well they move forward and shapes how the community can achieve their goals (Olgado, 2019).

To an extent, this fracture makes them a fascinating group to research, as well as difficult to understand in their totality. This research can give us insight into the complex nature of information sharing between private companies, educational institutions and individual citizens when working on a project. It has the potential to highlight how these distinct groups tackle the

same informational needs problem from their own unique angles, and how they share and communicate between themselves and with each other.

Literature Review

What Constitutes Preservation?

The most constant issue that arises in all of the literature revolves around the question of what preserving videogames actually looks like. No one seems to be able to come to a consensus. This is seen as both the authors and the subjects of their research all have differing standards and is well phrased by the 2009 Preserving Virtual Worlds report as trying to answer the question of

“...the essential nature of games. Either games are fixed objects—perhaps authored texts or built artifacts—or, they are the experiences generated by a framework of rules, codes, or stories and expressed through interaction, competition, or play. Text or performance? Artifact or activity?”

Kraus and Donahue found professional game developers seemed to have an assortment of preservation techniques but were often disorganized or put together as an afterthought to the point of arguing “a lack of industry interest in preservation. Many game companies simply are not concerned with their games beyond the development lifecycle” (2012). A prime example of this was when Kingdom Hearts, an influential game from Square Enix, a prominent game studio, had completely lost its source code after the game was completed (Williams 2018). This misstep forced the company to rebuild the main game engine for their follow-up sequel, but also cost them the ability to preserve the game in certain ways. Newman argues that corporations have a vested interest in obsolescence, pushing the narrative of the best new games are perpetually around the corner keep the masses coming back to buy more (2012). Furthermore, developers

have the most access to firsthand materials yet may lack the agency or time to work on preservation (Kraus & Donahue, 2012).

Meanwhile, some sources determined that hobbyist collectors tend to be fickle in their preservation pursuits (Gooding & Terras, 2008; Mora-Cantallos & Bergillos, 2018). When looking at hobbyist collectors in general, including those interested in other collection besides video games, it is seen that their activities are largely guided by personal interests (Gooding & Terras, 2008; Mora-Cantallos & Bergillos, 2018; Lee & Trace, 2009; Burnett, 2009). This “also means that the community is vulnerable to skill loss, erratic decision making and basic loss of interest among participants.” (Gooding & Terras, 2008) Conversely other studies found that some fan-based initiatives tended to be the most involved section of the community, exhibiting fervent behaviors and significant time dedicated towards their pursuits (Burnett, 2009; Kraus & Donahue, 2012; Mora-Cantallos & Bergillos, 2018). The literature recognized that the main conduit for interaction between individuals in this group was online, through forms or sometimes websites dedicated to preservation or collections (Mora-Cantallos & Bergillos, 2018; Lee & Trace, 2009; Burnett, 2009; Winget & Murry 2008, Kraus & Donahue 2012; Sköld, 2018).

When considering LIS professionals, one would think that standards would be top priority. Looking at the evolution of cataloging practices shows inconsistent terminology and erratic strategies from the 70’s to today (de Groat, 2015). Winget notes that conferences and academic journals are a source of information for scholars, typically appealing and catering to games studies specifically (2011). Although many other papers discuss different options for preservation and takes on the information behaviors associated with this conversation through

the other two groups, there was very little literature found that directly reviews the discussions made by the LIS subgroup in the context of information seeking behavior.

Dealing with Preservation Issues

Taking Wilsons definition of information needs into consideration, looking at the goals of the community can guide an understanding of their needs and behaviors (2000). This means looking at key difficulties that occur during the preservation process. Individuals and institutions need to answer questions regarding how collection and preservation will take place, what games to work on, and how will deterioration be dealt with.

There are many ways to preserve games, each way saves different aspects of the product (Winget & Murry 2008, Kraus & Donahue 2012). Winget and Murry discuss some of the pros and cons associated with four main methods: refreshing, migration, emulation, and re-interpretations(2008). While Sköld emphasizes including game related materials that can frame the cultural and social aspects of the game; partly to circumvent legal issues, but also as a way to contextualize their significance within their intended cultural moment (2017). These game related materials include player created content including fan art, let's play videos, mods, and the like which are commonly collected by larger institutions. "These inter-preservational approaches happen not only synchronically within a single community, but also diachronically across communities." (Kraus & Donahue, 2012)

Part of this disagreement has to do with the complexity of the software itself. Games are interactive media composed of code, images, animation, and sound files (Winget and Murry, 2008; Winget, 2011). Within the realm of digital preservation any one of those aspects alone can present unique issues to tend to, including the insidious bit rot. On top of this preservationists

may face the issue of hardware deterioration with no alternative means of playing games on physical cartridges or disks.

Acquisitions and maintenance of collections are also facilitated through the web for both institutions and individuals. Gooding & Terras found more games available for purchase through eBay than were preserved in public institutions in the UK (2008). While many sources found hobbyist collectors of all kinds connect through web communities to share information, memories, and current projects (Lee & Trace, 2008; Mora-Cantallos & Bergillos, 2018; Burnett, 2009; Winget & Murry 2008, Kraus & Donahue 2012; Sköld, 2018).

Collaboration & Division

None of the literature directly relating to the community connected behaviors to collaborative information seeking (CIS), however upon reviewing articles written by Shah and Grankiov et al it seems likely to be a good fit. Shah provides an overview to understand collaborative information seeking and concludes that while CIS is most often studied in terms of computer supported cooperative work, it should be seen as an interdisciplinary study that also involves information seeking and collaboration (2014). While Grankiove et al was interested in how CIS effects group work, with a focus on environmental scanning, the results found seven types of influencing factors that affect the outcomes of collaborative efforts: personal, group, task, information sources, system, organizational and external (2021). Applying knowledge from these studies may allow for a better understanding of how the individuals of the videogame preservation community collaborate, or in some cases where they fail to collaborate.

Transitioning into division within the community viewing legal issues is key, in particular intellectual property, becomes a big deal for this community. No matter the country, large game

studios will seek to protect their intellectual property. Lee discusses the key issues of migration and emulation (2018). It is argued that this is one of the only true long-term solutions to preserve games (Lee, 2018; Newman, 2012). In these preservation techniques there is an attempt being made to copy or reproduce something made by a company that holds intellectual rights. Lee highlights statements made by Nintendo damning the technology as “the greatest threat to date to... intellectual property rights.” He suggests that institutions should try reaching out to studios (2018). Barchell and Barr, on the other hand, call for collaboration between preservation institutions and hobbyist on the grounds of providing legal guidance and protection due to fan projects being shut down by developers (2014).

Gaps in the Literature

Even though many sources explicitly or implicitly utilize the three subgroups to understand this community, the research is unbalanced continually favoring hobbyist collectors. Some of this bias may be due to lack of cooperation from corporations, though many games now a days are created by indie developers composed of individuals or small groups. This also does not explain why papers have not considered turning the focus inward to investigate how different LIS professionals are interacting with the community or their needs to better understand these artifacts. The closest literature found approximating this side of things were papers related to librarians and archivists needs in understanding digital preservation and metadata in a very broad scope and did not mention games preservation personnel. Though they would typically be working with the same technology and maybe an adjacent group.

Another possible avenue would be to further explore the intersection of between the subgroups. Focusing on the dissemination of information and communication that occurs

between the three could illuminate why some of the issues that are happening are so prevalent and may produce means to overcome these frustrations.

Methodology

As this is the first attempt of graduate level writing, as well as, any type of dedicated research, I naively went straight to the Library and Information Science Source database to plug in a few basic variations of “Videogame Preservationist Information Seeking.” This did not work very well, however it provided valuable feedback that I needed to figure out research basics. During this period, I took a small diversion to google to conduct broader searches and verify that this is a viable active community that actually exists. After going through the INFO 200 LibGuide and several of the course materials focused on research basics, I constructed a list of related terms and searched the LISS, Taylor & Francis and GaleOne Databases for relevant peer reviewed articles. This produced a few usable works. Then able to cross reference citations and look at the key terms used both by the databases and the authors, I was able to expand my search and find more related specified articles that make up the core of my references. As the course went on, I realized that I could expand my search further to include the types of information seeking that they were exhibiting, mainly in terms of collaboration and technology use. Also, connecting with and reading the blogs of other students researching similar communities within the gaming sphere led to new ideas and resources that were not previously on my radar.

Discussion

Multifaceted Fascinations

The main goal facing the videogame preservationist community is large and multifaceted. This intensifies the communities’ separation and can be helpful in that it allows individuals to

focus on specialized interests and detailed work. This is bolstered by the fact that they are truly engaged in participatory endeavors in a digital space. Their communications and information seeking needs can be seen through a few different lenses, when looking at the individual actions the most useful being digital information behaviors as outlined by Burnett (2000). However, this can also be a hindrance as lacking consensus on objective standards stand in the way of unified progress. There are many difficulties individuals face while trying to preserve videogames, lacking communication channels means that members may be struggling with things that have already been solved by another group. While the online communication present in the hobbyist community does give a way for individuals to check in with each other, it can still be tough to connect or find the information if the problem was solved outside of that specific community as could be seen in the tight knit groups that formed in flopped games communities (Mora-Cantallos & Bergillos, 2018) and can be seen in the small world framework as outlined by Burnett (2009).

When the group works more cohesively in such projects as the Internet Archives (<https://archive.org/>) or other collaborative efforts potentially the collaborative information seeking as described by Shah could be a better way to view their actions (2014). Due to the abundance of work performed through fan initiatives, it can be concluded that these “hobbyists” have been propelling the community forward. An excellent example of this is how fan emulations of the game Adventure kept the game in a playable state from 1980 up until the Preserving Virtual Worlds project came along in 2009.

A Bisected Community

Lack of public funding and push back from companies over the previously discussed intellectual property laws (Lee, 2018; Bachell & Barr 2014) makes divisions within this community worse. Though these division exist it is seen that information professionals can contribute through keeping physical collections in institutions and adding a bevy of knowledge concerning organization practices. This combined with the dedication put forth from the fans, there is a true shared responsibility in the way LIS professionals and hobbyists interact (Kraus and Donahue 2012). They posit that within this setting both sides have unique skills and knowledge that the other can use and learn from.

Library Support

When looking at programming opportunities to support hobbyist things can get difficult as they aren't located in one area (Mora-Cantallos & Bergillos, 2018; Lee & Trace, 2009). There seems to be two key points of interaction between libraries and game preservationist hobbyists. One occurs during collection transfer and the other occurs when hobbyists are going to view or interact with larger collections (deWinter and Kocurek, 2017; Burnett, 2009). These larger collections are worth examination; as they can provide examples of how collections can be put to use for members of the preservation community as well as local community members within the libraries geographic region.

University of Michigan's Computer and Video Game Archive (CVGA) is one such collection. Housing 8,000 games, their philosophy emphasizes and encourages their patrons to investigate and play with any game in their collection and is open to students, staff, and the local public (Wood & Carter 2018). This indiscriminate play policy means that their collection sees considerable use, over 16,000 recorded interactions in 2017 alone. The policy serves to engage

their local community while staying true to the nature of the medium. Providing hands-on approach opens the door to a verity of learning opportunities that range from research to life skills. A game night put on by the library brings together graduate students whose first language isn't English to play games as a language acquisition tool (Wood & Carter 2018). This is a prime example of leveraging the libraries ability to provide innovative social learning experiences (Stevens, 2014).

An extensive collection that can afford to share its contents indiscriminately is not available in all situations, even so local public libraries can support this community too. As deWinter and Kocurek (2017) point out, many individuals become a part of this community over time and without knowledge until they recognize that they have a collection worth curating or donating to a larger institution. To that end, it is important to look at supporting future collectors. This can be done by supporting gamers in a broader scope.

There has been a growing movement to include access to games in public libraries. This trend can be used to harness individuals love of games to build community in a supportive learning environment. One such example out lined by Cilauro (2015) is the Minecraft Gaming Day event held by a North Melbourne public library. The library asked its young users if they could redesign their library what would it look like? By hosting the Minecraft server as a digital planning tool, they had participants working in both a virtual and physical world creating and learning together. Leveraging active learning as defined by Booth (2010), the youth shared ideas about the creation in game as well as knowledge about how to use the technology. This type of collaborative participatory culture is quite common in the gaming community at large but can

also be seen in the smaller games preservationist community. The ability of local libraries to host this type of experience while fostering curiosity is invaluable.

Conclusion

Videogames are an important part of our current cultural practices. As time progresses humans will continue to be delighted with new types of media; at this point in time interactive experiences are preferred by a large part of society. The preservation of these artifacts are hopefully here to stay. While the information seeking behaviors of this community reflect the diversity of the individuals and groups involved. Using digital means to connect in various ways that change depending not only on the individual's preference but also change with each task that they face. Due to the nature of this work this changing dynamic is not a surprise, though it is not easily captured and defined. Hopefully this community will be able to find ways to collaborate more efficiently in the future.

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