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Why Video Game Genres Fail: A Classificatory Analysis

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Abstract

This paper explores the current affordances and limitations of video game genre from a library and information science perspective with an emphasis on classification theory. We identify and discuss various purposes of genre relating to video games, including identity, collocation and retrieval, commercial marketing, and educational instruction. Through the use of examples, we discuss the ways in which these purposes are supported by genre classification and conceptualization, and the implications for video games. Suggestions for improved conceptualizations such as family resemblances, prototype theory, faceted classification, and appeal factors for video game genres are considered, with discussions of strengths and weaknesses. This analysis helps inform potential future practical applications for describing video games at cultural heritage institutions such as libraries, museums, and archives, as well as furthering the understanding of video game genre and genre classification for game studies at large.

Introduction

Genre classification is a traditional and widely used tool that assists people in a variety of ways. In literature, art, and other media, genres are used to categorize works based on sets of stylistic criteria, enabling users to identify works of interest. Genre also affords the grouping of similar works, allowing audiences to find—and purchase—new items, making genre classification and placement imperative to publishers, producers, and creators of media. Established genre conventions also offer creators a model to emulate when creating new works. Genre, and the classification systems that describe it, play a significant role in the media life cycle, from creation to consumption.

However, the emergence of new works and media, such as video games, challenge traditional genre conceptualizations and boundaries. Given the historic use of genre classification commercially, within media production, and among media consumers, we would expect to see genre used in similar ways for games promotion, developer communication, and user browsing. As game studies seeks to balance new affordances of games with traditional formalized classification methods based on film and literature, discussions of genre face an impasse. Video games are more than their narrative components: video games are interactive processes. Yet contemporary video game genre labels and classification systems fail to capture the novel complexity inherent in these games. What is it about video games that incurs such issues with describing genre?

This paper explores video game genre from a library and information science perspective, with an emphasis on classification theory, to explore current affordances and limitations of video game genre classification. In particular, we discuss the purposes of genres, how such purposes are supported by classification systems and conceptualizations, and the implications for video games. We argue that genres fail on a practical level because they do not adequately identify, collocate and support retrieval of games for interested users, and we also posit that genres inhibit creativity as they reify themselves through the creation of new games, and inhibit communication about games among scholars, educators, creators, and players. This theoretical analysis will not only help inform potential future practical applications for describing video games at cultural heritage institutions such as libraries, museums, and archives, but also help further the understanding of video game genre and genre classification for game studies at large.

Purposes of genre and video games

Taxonomic identification

Delineations of genre in many media stem from taxonomic ideals, or grouping based on identifiable characteristics. Most common genre classifications attempt to identify works based on observable, objective characteristics. For example, works of literature are often classified according to characteristics such as literary technique, tone, content, form, and other frequently found elements (Haolin, 2005). Genre labels for film reflect patterns, forms and styles used by creators, as well as those used for the reading of films by audiences (Bernink & Cook, 1999). Music genres are often identified by elements such as style, form, psychological and behavioral reactions, who listens to it, how it is produced, and what the music is communicating (Fabbri,

1982). It is through these combinations of characteristics that audiences can identify works and genres. Through this identification, genre indicates to an audience what kind of work is being presented, which in turn provides the audience with clues about to how to respond. Over time, genres form expectations based on identity: we learn to associate actions and reactions with the genre categories themselves, rather than individual works. These conventions provide a common understanding across a larger group, like an audience or society. Even people without personal experience of popular genres like romance, science-fiction, and fantasy can describe and identify them based on common, pervasive characteristics of theme, plot, and emotion (Dixon & Bortolussi, 2009). Research shows that movie viewers use genre labels to categorize, distinguish among, and form expectations based on genre attributes, which in turn creates preferences and affect viewing choices (Austin & Gordon, 1987).

Like examples in other media, video game genres also emerge from similar characteristics, but the choice of characteristics has varied over time. Among the first to tackle game categorization were game developers and scholars. Crawford (1982) made a distinction between "skill-and-action" games (including combat, racing, and maze games) and "strategy games" (including roleplaying, adventure, and educational games). Wolf (2001) derived 42 categories of games based on gameplay and interactivity (e.g., *Gambling*, *Racing*). He deliberately excluded other elements such as mood or theme, as his system was intended to be used alongside an imagery- or style-based system (such as film genres). King and Krzywinska (2002) suggested a 4-tiered hierarchy, emphasizing interactivity rather than narrative. However, these early systems face a variety of criticisms. Wolf's system lacks accommodation for modern genres like MMORPGs or First-Person Shooters (Whalen 2004; Clearwater, 2011). King and Krzywinska's hierarchy does not map to game websites, and the terms represent different dimensions of game elements occurring simultaneously rather than hierarchically (Whalen, 2004; Clearwater, 2011). Alternatively, Whalen suggests three categories: Massive (networked games involving massive number of players), Mobile (games designed for smaller screen and shorter play time), and Real (games requiring players to physically relocate themselves).

These early taxonomies mainly emerged in scholarly investigations of video games. Yet formal academic work is often overlooked by creators and consumers of games. In an attempt to bridge that gap, Aarseth, Smedstad and Sunnanå (2003) created a typology intended to facilitate communication between game designers and academics, game journalists and players. The revised typology presents five metacategories (i.e., *Space, Time, Player Structure, Control, and Rules*) that are further divided into multiple sub-categories and values for each category (e.g., *Perspective: Omni-present, Vagrant*). However, these genre labels do not map to the language commonly used by players or the commercial games industry, thus failing to identify and describe classes of games in the ways that players would identify them. Additionally, the complexity of such a scheme may be difficult for users such as game players to parse, thus widening the disconnect between games scholars and game creators and consumers, the very issue that Aarseth et al. sought to overcome. Rollings and Adams (2003) attempted to organize games according to labels that are recognizable by players (e.g., *Action, Strategy, Role-Playing, Simulations,* etc.) and that address new tools and technologies such as location-based gaming. Apperley (2006) also draws on four commonly used genre labels--*Simulation, Strategy, Action*, and *Role-playing*—to emphasize classification based on player interactions and relationships

with each type of game. Most of these authors rely heavily on ideas of genre from literature and film, revealing the traditional generic bias of these classification schemes.

One characteristic of division often simplified or overlooked in video game genre is purpose. Miller (1984) states that "a rhetorically sound definition of genre must be centred not on the substance or form of discourse but on the action it is used to accomplish" (p. 151). Genres are "how things get done," (Martin, 1985, p. 250), and so should be categorized not by structural components but rather "according to the particular jobs they are used to accomplish" (Johns, 1997, p. 24). Swales (1990) defined genre as a class of communicative events that share a set of communicative purposes (p.45-46). Yates and Orlikowski (1992) also characterize genre as communicative action composed of both communicative purpose and elements of form. They identified a variety of genres for organizational communication, such as business letters, memos, reports, and meeting minutes, based on the purposes of those documents. In music, a number of genre terms in the Naxos Music library as well as Allmusic.com's list are not based on musical style or characteristics, but on purpose-based qualities such as occasion (e.g., Holiday), message (Religious), or use (e.g., Stage & Screen, Relaxation Music). Bogost (2007) argues that videogames "represent how real and imagined systems work," explaining real world processes with other processes. By implications such as taxation or mass transit in the game *SimCity*, the major rhetorical functions of games are driven by interaction with such systems.

Both popular and formal conversations on the communicative functions of games have centered not only on procedural affordances, but notions of fun, aesthetics, and game design. Gygax (1989) argues that gaming's chief purpose is entertainment. Koster (2004) writes that because games are a primary format for human learning, this entertainment, or fun, is inherently more attractive in systems we do not yet understand. If a root of fun is indeed this chemically pleasurable learning, then our current profusion of new game genres would be unsurprising precisely because established, understood systems are less automatically pleasurable. While "fun" is often cited as the underlying purpose of a game, such enjoyment is contextual. Scholars, designers and players have worked for many years to develop and formalize what is meant by enjoyment. Hunicke, Le Blanc and Zubek (2004) suggest the need for a more robust vocabulary to describe different aspects of "fun" based on experiences players undergo. They refer to these aspects as "aesthetics" (i.e., Sensation, Fantasy, Narrative, Challenge, Fellowship, Discovery, Expression, and Submission). This non-inclusive taxonomy does not directly describe the communicative purpose of games but rather the aesthetic components that make that purpose—i.e., fun—possible. Different games use different aesthetics (or combinations of aesthetics) to communicate an enjoyable experience. For instance, *BioShock* uses a powerful narrative to convey delight to players, while *Words With Friends* relies on connecting players with others for enjoyment.

Both Hunicke, Le Blanc and Zubek (2004) and Schell (2008) discuss the "aesthetic" exterior of a game as something meant to be experienced. Both also discuss other factors such as technological affordances, game rules and mechanics as contributing to the experience of a game. Goetz suggested the term "conscious fantasy" as a further bridging between, "the two poles of fiction and underlying geometry" (Goetz, 2012). He offers the terms "tether" and "accretions" to describe the fantasies typified by *Minecraft*'s tethering players to a home base,

allowing them to gradually branch out with items, better character statistics, or other accretions. This echoes Yates and Orlikowski's definition of genre as a combination of communication and form. However, typical video game genre labels tend to capture a mix of "Story," "Mechanics," or "Technology," but do not represent the "Aesthetic" component.

Collocation and retrieval

In library and information science, one of the primary purposes of genre classification is to enable collocation and help users find similar items. Once works can be classified as part of a given set based on mutually exclusive characteristics of division, they can be collocated and retrieved for use. Such systems can assist audiences with not only identifying works of interest, but also searching, browsing, locating, and retrieving these works (Chan, 2007). Shared societal understanding of genre classification allows audiences and consumers to make decisions about media consumption (Behgtol, 2005). Audiences across media types rely heavily on genre to find, identify, select and obtain works. Genre is a major means of classification in information retrieval for media like books (Saricks, 2009), movies, and music (Aucouturier &Pachet, 2003; Lee & Downie, 2004).It is also one of the most important informational elements for searching and browsing video games (Lee, Clarke, & Perti, 2015).

However, the lack of concretely defined identification criteria (as described in the previous section) causes games with differing characteristics to be collocated in the same genre category. For instance, the popular gaming website Mobygames.com classifies *Super Mario Bros*. and *Grand Theft Auto* both as "action games." If users search or browse for games based in the "action" genre, they retrieve disparate, dissimilar results such as these. This may be because there are numerous and ill-defined dimensions or criteria that are being used as a basis for creating genre labels, which are not clearly understood by average users. Or perhaps *Super Mario Bros.* and *Grand Theft Auto* are actually classed in sub-categories of "Action," which means that labels from multiples levels of the genre hierarchy are being presented to users as a simple list. Both are problematic and can negatively affect users' search and browse activities.

When inexplicit definitions leave genre definitions vague, genre labels often become applied too broadly, to a large number of games. Such broad applicability also exacerbates collocation problems as increasing numbers of disparate games are added to the same broad category. Eventually, the category becomes so broad that it is essentially meaningless. This frustrates users seeking video games, as evidenced in user interviews (Lee, Clarke, & Rossi, under review):

> *"If you're looking on Amazon or something or whatever website to buy something,* ***action-adventure will be so huge, it's like half the games because it's a really broad and easily applied genre****..."* (P27, Gamer)

This is not unique to video games: broad genre labels that serve as a "catch-all" category exist for other media as well. The music genre label "Pop music" can include any genre of "popular" music. Action movies have similar issues as action games. Fiction and non-fiction are used to broadly categorize numerous sub-genres of books and other media. Fornäs (1995) discusses in detail how the musical genre "Rock" is so difficult to define because it is "a 'supergenre' whose

totality is not delimited to any specific subculture" (p.113). Yet while these other media have one or two broad catch-all categories with vague definitions, a majority of the commonly used labels to describe video game genre suffer from this issue, which makes finding new games of interest difficult. Genre labels like "Action" or "RPG" are both widely used in the domain. "Action" was the most popular video game genre across all platforms in 2013, accounting for 31.9 percent of all games sold that year (ESA, 2014). However, the identity of what belongs in these categories is unclear: what is really being described when we say "Action" or "Role-Playing"? Technically, all games would fall under the category "Action" given that they all involve some sort of physical input interactions that result in actions on the screen. A large proportion of games would also fall under the category "Role-Playing" considering RPG is commonly understood as "a game in which players take on the roles of imaginary characters who engage in adventures, typically in a particular computerized fantasy setting overseen by a referee ("role-playing game", 2010)" and in most games, gamers are not playing as themselves, but playing as a character. Yet in the *Halo* series, although gamers primarily play the role of the character Master Chief, the genre of the series is commonly perceived as part of the first-person shooter genre

In addition to lack of concrete definition, previous research reveals that commonly used video game genre labels are heavily overloaded and represent information on multiple dimensions (Lee et al., 2014), leading to user confusion as to how these genres are established (e.g., why is "Survival Horror" a genre but "Humorous Simulation" is not, or why "First-person shooter" is listed but "Third-person shooter" is not). For example, Table 1 shows the multiple dimensions embedded in sample genre labels from several game-related websites. Furthermore, a number of commonly used video game genre labels combine multiple genres (e.g., Action RPG, Third-person Action/Adventure/Shooter). As a result, lists of genres appear random rather than systematic, as they are not based on particular rules. This makes it challenging to identify the meaning of each label and to use the labels to identify relevant games. For instance, it is not clear if the label "Anime/Manga" refers to video games that have an anime/manga visual style, or games that are based on anime/manga books or movies, or other anime/manga media such as books or movies that are based on the game.

[insert Table 1 here]

Of all the commercial sources reviewed in Lee et al. (2014), only one (GiantBomb) provided definitions for genre labels. This places the burden of understanding and interpretation on users. Some genre labels may be better understood based on their proximity or placement within the genre taxonomy: for instance, both Allgame.com and Gamefaqs.com have separate genre labels for "Simulation" and "Sports," thus implying that sports games are not considered a type of simulation game, even if gameplay simulates athletic occurrences. Hierarchical relationships between super- and sub-category labels may also assist users with understanding genre identity: by categorizing "Tower Defense" as a sub-genre of "Strategy" games (allgame.com), users know that whatever a "tower defense" game is, it is not an action game, nor a puzzle game, nor a shooter, etc. Unfortunately, such definition by negation does not actually reveal the identifying characteristics that earmark a tower defense game.

Commercial marketing

Because genre classification serves to help users identify, locate, and retrieve items of interest, it has become a defining element in the production, distribution, and marketing of cultural media. Genre is the second most popular reason people buy books, subsequent only to author (Weiss, 2000; National Endowment for the Arts, 2007; National Endowment for the Arts, 2009) making it one of the two biggest market drivers in book publishing and sales (Greco, 2013). Moviegoers report that genre is the first and most important factor they consider when deciding to see a specific movie (Austin & Gordon 1987; De Silva 1998). In a survey of 1,257 gamers, 74% of respondents indicated that genre information is useful information when looking for new games to play or purchase (Lee, Clarke, & Perti, 2015).

Though journalists and critics often highlight games they see as sacrificing content for marketability (Bogost, 2010), game companies have analytics to back up the importance of marketing (Zatkin, 2012). A good, but poorly-marketed game sells on average eight times fewer copies than a good, well-marketed game (Zatkin, 2012). Given the importance of genre in driving market behaviors in film, music and literature, coupled with the profitability of games, the ongoing inability to find precise genre labels is surprising.

One example of the complexity of game genre is the popular game *MineCraft*, which sold 54 million copies across various platforms (Phillips, 2014) and earned parent company Mojang millions of dollars. The mix of components from action, strategy, adventure, and survival genres in this game gets *MineCraft* tagged with almost every genre label available for games, such as the following list from major gaming review sites:

- Sandbox, Survival (Wikipedia)
- Simulation (Allgame, GameStop)
- Action (Mobygames)
- Action-Adventure (Giantbomb)
- Adventure (1UP, Common sense media)
- Adventure>First-Person>Fantasy (Gamefaqs)
- First-Person Action (IGN)
- Fantasy (Metacritic)
- City Simulation (Neoseeker)
- Strategy (PSN)
- Action & Adventure, Strategy & Simulation (Xbox Live)
- 3D, Adventure, First-person (Gamespot)

All of these labels are technically accurate descriptions. Despite that, applying so many different genre labels to a single game confuses the game's identity and presents marketing challenges, as users seeking to buy games similar to *MineCraft* do not know under which labels to look, and companies wanting to market similar games have difficulty labeling them.

Game developers, distributors and marketers also tend to label games using extant genre labels to capitalize on their existing popularity and understanding. If, as noted previously,

"Action" and "RPG" are the genre categories that sell the most, it makes sense that game companies go so far as to class games in multiple categories so as to maximize market visibility.

Among journalists and indie game developers, established genre labels are increasingly seen as a mark of stagnation. Indie developer Anna Anthropy argues that the genres make it difficult "to describe, to pitch, to even imagine games outside the ideas that are already established" (Anthropy & Clark, 2014, p.8), discussing her experience of creating *dys4ia.* Users are also starting to become savvy to this type of marketing behavior, as evidenced by one interviewee:

> *"A lot of people search by genre, so like role playing game, action game. I have a big problem with genres being sorted that way, because I feel like it doesn't really sort the game by something that allows videogames to really be expanding and action* ***tries to pigeonhole all games****. It's like, oh this game is an action-adventure game, or oh this game is a platforming game, and if it's not a platforming enough game for them, then they feel like they got ripped off, but maybe the goal of the game was never to make a platforming game and* ***because of the fact that it got pushed into that niche of a genre that it actually problematized the game*** *as being able to actually do something that was new and interesting and might make people think oh well, maybe this is just a different kind of game."* (P5, Game Collector)

Some organizations attempt to overcome the challenge of genre labeling by letting users apply labels. A primary example is Steam user tags, and their efforts to crowdsource genre labels have met with some degree of success. However, examining the 303 popular tags posted on Steam website (as of April 9, 2015) reveals that there are many tags representing aspects other than genre such as mood (e.g., violent, funny), themes (e.g., robots, magic), setting (e.g., modern, Rome), and visual style (e.g., hand-drawn, stylized). Additionally, when the tagging feature was first launched, users also generated noisy data representing their taste or viewpoint (e.g., "Garbage," "Not a game") which was later addressed by Steam as they allowed users to flag offensive, abusive, inappropriate or unhelpful tags or tags containing spoilers[2].

Another obstacle is the tendency of game developers to actively combine elements of previously successful games in an attempt to create fresh content. In traditional documents, this is known as "genre colonization," where elements of one genre, such as form, are used to rationalize and legitimize changes in another (Beghtol, 2005). In these cases, audiences must understand the elements and expectations of both genres to make meaning. *Borderlands 2* is a good example of this: acutely aware of how it combines shooting, role-playing, and online cooperative genres, it pokes fun at itself for its own genre colonization. In the downloadable content for *Borderlands 2*, "Tiny Tina's Assault on Dragon Keep," a homicidal teenager runs a *Dungeons & Dragons*-style campaign for the characters of the game's main storyline. The optional mission "MMORPGFPS" riffs on the MMO game type, creating villains that appear to

[2] http://www.gamespot.com/articles/valve-curbs-abusive-steam-tags-after-games-were-tagged-with-not-a-game-hipster-garbage/1100-6417780/

be players competing for your *Dungeons & Dragons*-style treasure. As developers increasingly combine and colonize genres, players need to be similarly aware.

Though Gearbox Studios' genre blending may have made *Borderlands 2* more discoverable, it was not the only factor in it being one of the most played games on Steam, with an estimated 2.9 million *active* players (Orland, 2014). One factor is certainly quality: with a Metacritic score of 89, and similarly high ratings elsewhere, it is considered a "good" game. However, *Borderlands 2* also benefitted from a substantial marketing budget. Given the receptiveness of gamers to use genre labels for purchasing, refining these labels seems likely to benefit small or new independent developers who may otherwise have a difficulty breaking out.

Education and instruction

Genre can also help users learn about and understand a domain, thus serving as a pedagogical tool. Genre is often used for instructional purposes because genres reflect examples of texts and other works that students need to learn to understand and produce. Kay and Dudley-Evans (1998) identify several benefits of using genre for instructional purposes, such as enabling students to enter a particular discourse community, promoting a scaffold for students' writing through models to follow, and so on. However, Kay and Dudley-Evans also describe challenges of using genre in instructive contexts. Genre can be prescriptive, forcing students into specific approaches and leading to student expectations of being told how to write certain types of texts. Such restrictions may reduce imaginativeness and creativity, and demotivate students interested in more original approaches. This is similar to Coe's (1994) notion of the "tyranny of genre," where taxonomic characteristics of genre divisions influence authors and artists, leading them to create works within those narrow confines that then reify that genre.

As education in game design becomes increasingly formalized, two major approaches to the use of genre are becoming evident. The traditional approach emphasizes the use of individual games to understand the mechanics and meanings of games more generally (Schell, 2008). Because game industry hopefuls are often fans, it is not uncommon to find them deeply familiar with a range of games. Rather than genre labels, individual game titles form a stand-in language for the types of gameplay students encounter, and then attempt to design (Clark, 2012). This assumption of knowledge, beyond genre and into specific titles, can be seen in the language of common introductory design coursebooks. For instance, in *Game Design Essentials* (Novak, 2011) we see game titles being used to further elaborate on game elements: "...from simpler arcade-style games such as *Dungeon Siege* to the graphically rich environments in *Final Fantasy*… (p.75)." Though heavily critical of genre, the use of games to inform games is such an established convention that even textbooks by major critics of genre go in-depth into classics like *Super Mario Bros.*, and award-winning titles like *Papers, Please* (Anthropy & Clark, 2014). The present utility of using games as their own symbolic language, between students and professionals who have already invested thousands of hours playing various games, eclipses even advanced genre labels because each token game name is often representative of several hours of firsthand experience.

More recently, developers and educators have begun putting forth formal academic models for game design. The Mechanics, Dynamics, and Aesthetics (MDA) model of game

design, discussed in an earlier section (Hunicke, Le Blanc, & Zubek, 2004) was developed from a variety of approaches to understanding the game experience, such as Flow theory (Czikszentmihalyi, 1990) and established design lectures (Barwood & Falstein, 2002; LeBlanc, 2004). The hope was that giving designers a tool to model design and assess their progress and success would strengthen both the development of games and the research and education surrounding them. The MDA model helped to refine, and otherwise inspire a number of similar formalizations to the understanding of games, especially in the context of education. As the backgrounds of audiences and practitioners expand, the development of formal theory may well be a critical link to more efficient game genres, and vice versa.

Instability of genre

Like biological classification, strict taxonomies of genre can allow formation of groups of similar works, therefore assisting in identification of as-yet-unclassified works. Beghtol (2005) notes that like any other classification system, genre classification should adhere to methods and best practices for classification, such as mutual exclusivity (i.e., no two classes should overlap in characteristics) and joint exhaustivity (i.e., every item can be classified somewhere in the system).While ideal classification systems adhere strictly to these practices, most classificationists know that in reality it is a fable. True mutual exclusivity is impossible (Jones, 2007). Many characteristics of division based on convention and arisen from practice may lead to overlapping descriptive characteristics. The previous section clearly demonstrates this issue for video games.

In addition to taxonomic characteristics, genre categories are defined by social conventions. For instance, in Grove Music Online, genre is defined as "a class, type or category, sanctioned by convention" (Samson, n.d.). Fabbri (1982) defines genre as "a set of musical events (real or possible) whose course is governed by a definite set of socially accepted rules." This is also true of Yates and Orlikowski's (1992) definition, where genres are defined through habitual social actions and therefore subject to evolution as those habits and actions change. Because genres are conventionally defined, they are subjective, imprecise, and variable, suggesting that genre categories are naturally not rigid and stable; rather they are more loosely grouped and fluid categories. This makes using genre as an access point especially challenging for users who are unfamiliar with the domain or come from different cultures (Lee, Downie, & Cunningham, 2005).

As these changes occur, familiar genres become unstable and new genres emerge. For instance, as information access and literacy increased in the 18th century Western enlightenment, new types of literature (such as the novel) emerged, challenging the established taxonomy (Prince, 2003). Likewise, for video games, new genre terms such as "Metroidvania" emerged to describe games with gameplay elements from two video game series: *Metroid* and *Castlevania.* "MOBA" (Multiplayer Online Battle Arena) appeared as an alternative term for Action RTS (Real-Time Strategy). The constant addition of new classes destabilizes the taxonomy and confuses readers and other media-seekers who relied upon those categories and characteristics to identify, select, and retrieve works to use for entertainment or education (Beghtol, 2005). The new classes themselves are also problematic, as they often have no formal definition but rather they rely on general agreement within the community. Additionally, many new genres also contain aspects of

previous genres and are therefore still classed in previously existing genres as well (Orlikowski & Yates, 1994). "Roguelike" is an increasingly common superseding genre descriptor based on the 1980 game *Rogue*, which was played not necessarily to win, but rather to see how far one could get without losing." Roguelikes may also be platformers, such as *Rogue Legacy* or *Risk of Rain*. They might also include survival, crafting, and action elements, for instance *Don't Starve* and *Sunless Sea*. Sometimes these classes are based on the typified games and brands of specific game companies. "Bioware games" might refer to roleplaying games heavy in story and character-driven narratives, even those not made by the Electronic Arts subsidiary Bioware. The label "indie," though the title could be attached to near every imaginable genre, is nonetheless prominently used by players, developers and retailers. This destabilization also reveals the subjectivity and relativity inherent in genre taxonomies, shifting the purpose of genre classification altogether. Cohen (1986) argues that such instability may serve a purpose in and of itself: as genre concepts evolve over time, viewing texts accrued in a genre category can offer a reflection about the genre itself. Genre then is no longer understood as the category itself, but the process by which the category was created, and can be used to reveal trends and understandings. As video games continue to mature, examination of this process for video game genre becomes increasingly critical.

Alternative approaches to genre for video games

Current conceptions and definitions of video game genres fail because they do not offer concrete set identification, offer poor collocation and retrieval, inhibit creative development, and monopolize and/or skew sales. Additional instability due to social construction and subjectivity bring challenges to users seeking to find, play, use, and research video games. While no genre classification can meet theoretical ideals and satisfy all users, we propose some alternative ways of conceptualizing genre identification and classification for video games that attempt to alleviate some, if not all, of these issues.

Families, prototypes, and examples

Genre classification is challenged by the blending of multiple genre elements and evolution of video games. Rather than traditional conceptualizations of genre that attempt to create strict and rigid taxonomies, it may be useful to adopt a more flexible approach based on theories such as Wittgenstein's "family resemblances" (1953/2001) or Rosch's prototype theory (1975). Askehave and Swales (2001) discuss that the genre movement recently has also focused on categorizing discourses as members of particular classes rather than taxonomizing *per se*.

Wittgenstein used "game" as an example category to point out the limitations of classical theory: there are in fact no common properties shared by all games, but the category of games is united by *family resemblance* (Lakoff, 1987). He saw "a complicated network of similarities overlapping and criss-crossing" (Philipp & Raatzsch, 1993, 58) among games as skill, luck, element of amusement, etc. are shared by only some members of the category. This also holds true to video games. As categories themselves, video game genres might benefit from this approach. For example, role playing games typically refer to games which have the player assume a role, are set in worlds to be explored, have a strong narrative component, and employ some kind of character development system. *Fire Emblem* games are commonly considered

Strategy RPG games, but they have no exploration component. This conceptualization of genre only requires that a critical, identifiable mass of characteristics be present to indicate that a game be classed as a particular genre, rather than requiring all attributes to be present.

A similar idea rests in Rosch's (1975) prototype theory, where prototypical examples are used to illustrate classes. In her study investigating the nature of human categorization, she tested how well subjects judged various instances of a category work as an example of a category (e.g., robin, owl, penguin as instances of a category "bird") (1975). The results indicated that certain instances do work better than others for representing each category (e.g., robin is a better example of bird than penguin). This may also hold true for video games, where users experience challenges identifying "correct" genre labels based on instructions or reading definitions. Many video games, especially newer ones, attempt to combine or borrow elements from multiple genres. This means that they may end up being marginal examples rather than featuring the most representative characteristics or elements of each genre (e.g., leveling up in RPG, exploration in Action-Adventure). They may also end up split across multiple genres (e.g., *Catherine* is a puzzle game as well as an action-adventure game). It may be more useful to explain genres with prototypical examples, such as how *Bejeweled* is generally viewed as a better example of a puzzle game than *Portal,* and *Grand Theft Auto* is a better example of an action game than *Patapon*. For improved user comprehension, it may make sense to list prototypical examples of each genre rather than trying to explain a set of criteria that a game needs to meet. Prototypical examples based on specific game titles may also align with and reflect the way users, especially game designers and educators, describe game genres through the use of titles. In addition to using game titles and games themselves, users also tend to combine games to form new genre descriptions. This type of "mixture description" is increasingly popular across media types and offers descriptive potential (Organiscak & Twidale, 2014).

Flexibility and facets

Thinking about the level of specificity or structure of genre classification may also help alleviate some issues with existing video game genres. Rather than the traditional hierarchical structure of genre taxonomies, a faceted structure may allow more flexibility and extensibility. Faceted classification is based on the idea that multiple dimensions of information are represented in a subject, each of these dimensions can be teased out, and the subject can be decomposed (Ranganathan, 1967).The different game genre facets discussed in Lee et al. (2014) are shown in Table 2 with some example games. Distinguishing these different dimensions of information allows us to combine a number of these facets to represent a genre.

[insert Table 2 here]

This approach is more flexible than a hierarchical structure and easier to update since everything is decomposed. A faceted approach may also help address the formulation of new genre labels with clearly identifiable meanings by reducing the overload of information contained in a single label. Additionally, the process of facet analysis offers insights to game studies scholars and other researchers interested in understanding the variety of elements being described in genre labels, and their importance to various user groups.

Appeal factors

As genres in other media such as literature continue to evolve and change, readers rely less on rigid genre definitions and increasingly on authors and appeal factors (Saricks, 2009).The aesthetic factors from Hunicke, Le Blanc and Zubek (2004) lay groundwork for understanding why players choose particular types of games. Others identify sub-categories of these core aesthetics or player categories. Attempts to think about what truly attracts and motivates us to play games, listen to music, watch movies, and read may be satisfying and fruitful in connecting players with games of interest. Similar attempts have been made in other domains such as library and information science in discussions of reader's advisory. Saricks (2009) and Pearl (2012) discuss different "appeal factors" or "doorways" to explain why certain fiction appeals to particular readers (e.g., story, character, language, setting, pacing). Such specific elements within games, for instance Goetz's tether and accretions or Schell's elemental tetrad, have taken scholars time to unpack. Even as theory works to catch up with extant games, new games may continue to introduce further novel functions on a semi-regular basis. So while theory works to play catch up with games, game genres may further see themselves locked in a consistent process of definition and realignment so as to meet the practical and theoretical needs of those seeking the purposes of genre. Furthermore, rethinking genres based on the reasons people play may offer more insight into the communicative and rhetorical aspects of genre theory, and in turn assist game studies scholars better understand player motivations and other areas of interest.

Conclusion and Future Work

Video game genres, in their current formative state, make for an exciting possibility space. While genres are not without issues and limitations, they are still a primary access point for users searching and browsing video games and other media objects. Exploring alternative conceptualizations of genre may offer increased access to games as well as insight about games, especially as video games are increasingly included in collections of cultural heritage institutions like libraries and museums. Additionally, the types of information embedded in genre reflect further subject metadata worth exploring, such as mood, theme, or plot elements that may be useful for users seeking games as well as scholars and others who seek understanding about games. This is especially critical for game-centric institutions, such as the Seattle Interactive Media Museum and The Museum of Art and Digital Entertainment, which require much more in-depth and specific descriptions.

Formulations of genre serve to empower and inform not merely consumers or academics, but the rising numbers of games companies, independent developers and hobbyists. Given the longstanding trend of game developers to closely follow established genres in practical game development, the cultural maturation of video games may well be tied to the maturation of video game genre labels, perhaps even the field of game studies. Put another way, genres may so frequently fail video games because we have not yet developed either the games emblematic of certain genres, or the refined methods with which the meaning and importance of those games will finally be unpacked. Close attention to the development of contemporary genre labels may be of critical importance to the ability of future generations to reflect on the processes by which these categories came to be.

It is evident that genre classifications and labels are as much "bottom-up" products of a community as they are "top-down" taxonomies. Genres rejected by their community of use will be useless to those communities. Because our research aims to serve users seeking games, such as in video game information retrieval systems for the aforementioned types of institutions, it is imperative that we involve these communities in any formulations of genre for such systems. We plan to continue our research by conducting user studies where we ask about the core reasons why people play certain games in particular genres, so that we can explore how we might use those appeals for organizing games in video game information retrieval systems.

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Tables

Genre Label	Source	Aspects represented in the label											
		Game Mechanics	Hardware	In-game Activities	Intended Age	Media	Number of Players	Point of View	Purpose	Setting	Theme/ Mood	Time	Visual Design
3D Real-Time Strategy	Allgame							x			x	x	
Action RPG	Gamefaqs			x							x		
Adult Text-based Adventure	Allgame	x			x	x					x		
Anime/Manga	Moby					x							x
Console-style RPG	Gamefaqs		x	x									
Education	IGN								x				
Futuristic Racing	Allgame			x						x			
Ground Vehicle Combat Sim	Allgame			x							x		
Horror	Gamefaqs										x		
MMO Real Time Strategy	Ranker						x				x	x	
MMORPG	Ranker			x		x							
Sandbox games	Ranker	x											
Third-person Action/Adventure/Shooter	Allgame	x		x				x			x		

Table 1. Dimensions of information represented in “genre”

	Super Mario Bros.	***Mortal Kombat 3***	***Bejeweled 2***
Gameplay	Action	Fighting	Puzzle
Style	Platformer	Versus	Tile-matching
Purpose	Entertainment	Entertainment	Entertainment
Target Audience	-	Mature 17+ (ESRB)	Everyone (Android)
Presentation	2D, Side-scrolling	2D, Isometric	2D, Static background, Grid-based
Temporal Aspect	Real-time	Real-time	Turn-based
Artistic style	Retro	Retro	Abstract
Point-of-view	Third person	Third person	Top down
Theme	Fantasye– Princess	War and Fighting – Combat, Sci-Fi, End of the world– Post-apocalypse	-
Setting	Spatial–Virtual world, Spatial– Nature	Spatial–Virtual world, Temporal –Futuristic	-
Mood/ Affect	Quirky	Aggressive	-
Type of ending	Finite	Finite	Infinite

Table 2. Sample games illustrating the decomposition of the facets of video game genre