Online Games

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When we agreed to edit the theme on online games for this Encyclopedia our first question was, "What is meant by online games?" Scholars of games distinguish between nondigital games (such as board games) and digital games, rather than between online and offline games. With networked consoles and smartphones it is becoming harder and harder to find players in the wealthy industrialized countries who play "offline" digital games. Most games developers now include some element of online activity in their game and the question is: What is the degree to which the gameplay experience occurs online? Is online gameplay more a multiplayer than an individual experience? If we move beyond the technological meaning of "being online" we should, as Newman (2002) argued, be concerned with varying degrees of participation during gameplay.

We wanted to embrace a broad approach to online games and explore the possibilities of the term, rather than to narrow it down. Contributors were given some leeway in interpreting online games – and thus the reader will find examples ranging from early multi-user dungeons (MUDs) to massively multiplayer online role playing games (MMORPGs), and from first-person shooter (FPS) online games to browser games. This diversity points to the challenges faced by scholars in this field. Not only is there little agreement about the use of terminology such as "online" games, but different collective nomenclatures are used, varying from "video games" to "computer games" to "digital games." While North American scholars and publications tend to use "video games" or "videogames" as the collective term, scholars in Europe have adopted "digital games" or "computer games." To make matters worse, the publishing arm of the industry uses the terms interactive software and interactive entertainment to avoid certain regulatory and legal issues (Kerr, 2013). Even the term "gaming" is troublesome. In Western Europe "gaming" is used sometimes with reference to forms of gambling and an emergent area of research concerns those genres where the distinction between gaming and gambling is breaking down. Galloway (2006) uses the term "gaming" (p. 2) to refer to the entire apparatus of the video game, including both the organic and inorganic machines. For others online gaming is a set of social practices or, indeed, sociotechnical practices.

As in any area of research in the media and communications field, a personal interest and some gameplay experience are useful and help to overcome the "experiential gap" that Shaw (2010) discusses and which can lead to outsider status. Experiential knowledge helps researchers to communicate with gamers and game developers and leads to more informed research projects. We are aware that not all researchers in this field have such experience. Indeed, it is common for a games researcher at an academic communications conference to start a talk by asking how many people in the audience play games. It cannot be assumed that a majority of the audience is playing games in the way that television or internet researchers might assume. Nevertheless, the likelihood of game players being present varies by age group and country and the data suggest that the trajectory is one of growth. This question may not be asked in another decade.

We have tried to ensure that the entries on online games cover significant theories and research conducted within the communications field on online games and reflect the international dimensions of this field of research. Regardless of the rate of growth of game playing over the past four decades, we now have at least three decades of scholars from a range of disciplines in many countries applying, adapting, and extending academic methodologies and theories in

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the context of games. No postgraduate student today enters the world of online games without the help of an existing scholarly literature, but perhaps one of the challenges has been finding the key literature. Some of this literature is not in English and much of it is dispersed across a range of disciplinary journals. An important aim of the entries on online games in this Encyclopedia is to identify work that is state of the art and synthesize some of the core theoretical and empirical research in the field. Even if there is disagreement with the focus, methods, or outcomes of some of the early work, it is important to engage with it and to acknowledge the theoretical and methodological eclecticism of the field as a bonus and the lack of a reified "canon" as an opportunity.

The following offers an overview of online games and their origins, of online game culture, and traces the key themes that have emerged in communications and related research to date. We outline different scholarly approaches to studying online games in the social sciences and humanities (embracing experimental, textual, political economy, and cultural studies) and point to emergent themes that are ripe for research.

What Are Online Games?

Online games are played on or over a computer network, most commonly the internet (Crawford, Gosling, & Light, 2011). The requirement for a network connection, a platform of some type (console, computer, cellphone), and often a subscription means that online games are mostly only accessible to relatively affluent people in well networked parts of the world (Dyer-Witheford & De Peuter, 2009). Most digital games in the second decade of the 2000s have some networked or online element and, increasingly, games are moving entirely online, although there is some resistance because of the control that it gives game companies and others to survey player behavior.

The most widely known online games are MMORPGs, which are persistent worlds that a player engages with in real time and which continue after a player logs out. One such game is *World of Warcraft* (Blizzard) and although the game was developed in North America, there are now more players in China than in Western markets. Other forms of online games are nonpersistent and session or peer-to-peer based. A player logs in and starts a play session either against other people or against a machine. Examples include FPS games, where players log in to compete against each other (e.g., Activision's *Call of Duty*, Riot's *League of Legends*), and social or casual games, where gameplay can be asymmetrical (e.g., King's *Candy Crush Saga*, PopCap's *Plants vs. Zombies*) but sometimes involves synchronized updates across the players' social networks. These games range from the very complex 3D graphical worlds with thousands of simultaneous players playing on high-end personal computers (PCs) to simple flash games played for short bursts of time against a computer and in a browser. Online games can be played on PCs, consoles, cellphones, tablets, and handhelds. Some online games are single player, but most games include a multiplayer mode. As with other media texts, online games have given rise to a rich and varied player and third-party online culture of paratexts, and help and cheat guides and tools.

The origins of online games lie in nondigital traditional games, sports and theater, and there is a rich tradition of studies of play that informs digital game studies (Avedon & Sutton-Smith, 1971; Caillois, 2001; Huizinga, 1949). In addition, artists, hackers, and computer scientists have explored the potential of computer based connections, interactivity, and virtual reality through installations, simulations, and hacking projects. The journal *Simulation & Gaming* has been published since 1970, and the first computer based games emerged in public research laboratories in the United States in the late 1950s; they were usually distributed free of charge. Pen and paper role playing games, often with a war or fantasy theme, and live action role playing games existed before digital games. One of the best known is *Dungeons & Dragons*, first published by Tactical Studies Rules in 1974. Gary Fine's (1983) book, *Shared Fantasy*, provides an early sociological study of user motivations for playing these games.

Taylor (2006) traces MMORPGs back to tabletop games and especially to *Dungeons & Dragons*. She notes that these types of games provide the basic structure for many online multi-user fantasy based games, including character sheets, group

action, and the use of statistics. Less than 10 years after the first commercial games on consoles and PCs, computer based "multi-user dungeons," or MUDs, were developed. Richard Bartle and Roy Trubshaw developed MUD1 at Essex University in the United Kingdom in 1980. Bartle describes in his entry Multi-User Dungeons (MUDs) how, despite these games' text based nature, communities of students and academic players gathered to experience play and competition over the internet. A key feature of MUDs was that the player could communicate while he or she played, if only through written text. Another important aspect of early online game playing was that the code was open source software and was freely available. This meant that the original MUD spawned copies, competitors, and emulators, albeit mainly in the educational world. In 1989 TinyMUD was developed at Carnegie Mellon in the United States and focused less on fantasy competition and more on socializing and world building.

By the 1990s, persistent graphics based virtual environments with multiple users started to emerge. One of the first commercial graphical online games to reach significant player numbers in the general population in the West was Blizzard's (1996) *Diablo*. This was followed by Origin's *Ultima Online* in 1997 and the virtual environment *Second Life*, from Linden Labs, in 2003. These later environments encouraged user generated content and more multiplayer activity than had been seen hitherto. Of key importance to scholars in the field was the facility for players to create and customize an avatar based on preset characteristics, the ability to communicate through text and increasingly through voice to other players, and the requirement to collaborate in groups in order to compete. To some degree, these MUDs and multiplayer virtual environments developed as a sideshow to the commercial heart of the games industry that was focused on arcades and home console platforms. The early 1970s saw the first consoles commercially released in the United States while, in the United Kingdom, the relatively cheap Sinclair home computer was widely embraced as a platform for developing amateur games. In the 1980s, the Japanese games company Nintendo launched a games console in the West and targeted its iconic characters and games at children, transforming digital gaming. Sony is a relative newcomer and Microsoft even newer. It was not until the first decade of the twenty-first century that consoles were internet ready and that they had the capability to support multiplayer online games. Today, there are fewer and fewer technical reasons for online games to be tied to PCs, although the quality of the broadband network is an issue, especially in regions of the world where bandwidth offers slow data transfer or is very costly.

Online games are material as well as virtual objects. The development of an MMORPG can involve years of effort, hundreds of person-hours, and very large financial investment. The maintenance of an MMORPG relies on a team of support and technical staff, and an extensive network of international servers, computers, and software. These technosocial networks are vulnerable to natural disaster, material decay, third-party attack, and commercial decisions (see Online Games Preservation). The material network of online games also embeds certain political and commercial decisions about the role that is given to game players. In 2013, Microsoft reversed its plans to require Xbox One players to connect online to play offline disk based games, which would have restricted their ability to play "used" or second-hand games. Online gaming raises issues that are as much about a struggle over control, surveillance, and boundaries as they are about gameplay. Embedded technologies may limit the number of accounts a player can have and the number of installations that can be made, which thus affect how, where, and for how long a gamer has access to an online game.

An important aspect of understanding online games is who produces, distributes, and maintains the predominantly commercial material artifacts. The first documented computer based games emerged in public research laboratories in the United States in the late 1950s and 1960s. Most were developed by research scientists working on defense and military projects, and this relationship has continued in various guises in the United States in particular (see Online Games and Militarism). The first commercial console games were produced by Atari in the United States in the early 1970s, although there were earlier coin operated arcade games. Japan has a long history in arcade games and in animated films and it is not surprising that many of the

first game companies emerged in that country. Nintendo, for example, was a flower card company before it moved into games. The United Kingdom's early history of PC development and computer hobbyists also seems to have shaped its computer game development industry (Haddon, 1988). Given the context of the 1960s and 1970s it is perhaps not surprising that the first games drew upon themes of space, the Cold War, and sport.

The online games industry is shaped by this pre-history. Nintendo, Sony, and Microsoft are significant players because of the struggles and strategies of previous generations of game companies, but the shift online has brought companies such as Apple, Amazon, and Facebook into the field alongside game natives such as Valve, Ubisoft, NCsoft, and Tencent. The production landscape is complicated by the fact that some companies produce both hardware and software, while others specialize in software. Games are more than software, however, as O'Donnell (2012) has pointed out. As game development companies and projects have grown in scale, game development jobs have expanded to include audio, design, art, project management, and programming. As the industry moves increasingly online, these positions are joined by numerous community and technical support roles. Game production can be conceptualized as cultural production and the games industry as a creative and cultural industry (Kerr, 2006), although parts of the industry resist this mantle as they attempt to oppose the forms of regulation and control that come with it. The producers of online games are widely distributed in the Western nations, although there is a significant struggle for control between the main platform and hardware gatekeepers and among the global regions of the Americas, Europe, the Middle East and Africa (EMEA), and Asia Pacific.

Today's commercial online games are a long way from *MUD1* and might better be described as the "ideal commodity in post-fordist information and promotional capitalism" (Kline, Dyer-Witheford, & De Peuter, 2003, p. 62) since their producers are part of global production and consumption networks. We find examples of cultural hybridization and glocalization in some of these games as companies explicitly design games that will sell across cultures. We find highly contested local and intraregional cultures as game players negotiate, adapt, and adopt game content and there is evidence of contraflows to the West. This is, however, a highly volatile industry, haunted by failures, and industry analysis is hampered by the fact that there are few independently verifiable statistics. Even after an online game is launched it continues to develop, expand, and change and game players have an important role in the production process from testing and providing feedback to providing publicity and new types of content.

What Are Online Games and Who Plays?

The communities and cultures that surround online games are being mediated by the same technologies that are used to play the games. In the mid-1990s, when internet connections were slow and relatively expensive in the industrialized countries and in emerging markets, players would often carry their consoles or PCs around with them and set up local area networks in houses or other venues to enable them to play multiplayer games. Some of that co-present play has translated into professional game playing tournaments (see also Professional Gaming) and into local indie game jams where amateurs and developers come together to develop games in a short period. In major Asian, European, and North American cities, internet connections are now fast enough for players to connect online from their homes, university dormitories, trains, and schools, without having to be colocated. Online games via mobile devices and mobile applications, or "apps," are providing an important new revenue stream for the industry.

Many aspects of online games and online game culture in its contemporary form emerged in Southeast Asia. In South Korea, the government banned the importation of Japanese consoles for sociohistorical reasons, but its investment in national broadband networks provided a stimulus for new forms of game playing online to emerge. Unfettered by the moral panics often evidenced in the West, this new gaming culture thrived in gaming cafés called PC bangs and created celebrity players with tournaments broadcast on television and streamed online (Hjorth & Chan, 2009). This online gaming culture differed considerably from the more privatized and mobile gaming culture

that developed in Japan, Western Europe, and North America. Similarly, microtransactions and prepaid cards emerged as a successful business strategy in Asian markets before they emerged elsewhere. In addition, companies in South Korea, Japan, and China have developed games for Western markets demonstrating that, in this domain, the flow of content and ideas is not one way (Jin, 2010).

A large-scale survey commissioned in 2012 by the Interactive Software Federation of Europe (ISFE) found that 81% of respondents, on average, across 16 countries stated that they had played games online with other people in the previous year (ISFE, 2012). A South Korean government report put the online games element of its domestic games market at 70% in 2012 and forecast the major growth sectors as online and mobile. A 2013 industry survey by the Entertainment Software Association (ESA, 2013) in the United States found that 62% of players played online. Instead of face-to-face communication with a team and competitors, players are using digital communication channels to communicate while they play online or, in some cases, they turn them off when they experience racist, sexist, or homophobic forms of trash talk (see also Online Games and Racism, Sexism, and Homophobia). Secondary audiences or viewers of gameplay are a growing feature of online games and live streaming of gameplay is becoming a new form of online content and a new revenue stream for the industry. Live streaming and broadcasting of professional game playing are documented in publications on e-sports (see also Professional Gaming).

A widespread assumption is that online gaming is the sole domain of children and youths, particularly males. Player research, however, indicates that game players vary by genre, platform, and country with certain types of games and platforms attracting a particular demographic. Adults are increasingly playing online games and more games are being produced that target an over-18 market. International academic and industry surveys of children and their leisure time activities confirm that playing online games is often the most popular activity online for children up to 12 years of age (see also Online Games and Children; Haddon et al., 2012). In North America and Europe most of these games were developed by large commercial entertainment companies and are provided "free" to game players. Children are playing games targeted at children and, in some cases, games targeted at teens and adults. At the same time, player populations are aging. The 16 to 24 year olds are intensive game players on console and computer with men still outnumbering women in all age categories (ISFE, 2012). Studies of MMORPGs conducted in North America and Europe point to a mean age in the 20s and an 80/20 male to female split. Peer-to-peer games such as FPS are more male dominated and slightly younger (see also Online Games Player Characteristics). Casual online games such as card and puzzle games have a larger and older female player base. Across all platforms, the educational attainment of players tends to be high, reinforcing the access issues mentioned above.

For Taylor (2006) online gaming is "deeply social" (p. 30) and players go through a process of socialization when they join a game. Early studies of online games mapped identity play and compared online social interactions with offline activities; for example, Dibbell's (1998) account of a virtual rape in *My Tiny Life* at the end of the 1990s. His book recalls how the community of players struggled to introduce some form of moderation and social control that eventually evicted the perpetrator from the game and resulted in the introduction of a system of player petitions and ballots. Higgins in his entry in this Encyclopedia (Online Games and Racism, Sexism, and Homophobia) discusses how this incident points to the enforcement of white heterosexual normativity.

An Emerging "Field"?

Academics within media and communication studies have been studying digital games and digital game playing from a variety of perspectives since the 1980s (Anderson & Bushman, 2002; Provenzo, 1991). Much of this work applied existing methods without much adaptation to the context of gaming and was highly critical of digital games and their effects on people. Examples are studies employing content analysis of game covers and magazines and laboratory based studies of the effects of short periods of gameplay (see also Online Games, Effects of; Online Games and Crime). Other scholars have

criticized some of the methods and approaches used in these studies (Bryce & Rutter, 2006). Nevertheless, this work was valuable in establishing digital games as worthy of scholarly study, in prompting researchers to apply alternative theories and methods, and in finding publishing outlets. This early research was supplemented with books by journalists that were typically celebratory of the rise of what was seen as a democratic form of entertainment. In between the utopic and the dystopic discourses, there was much work to be done to examine appropriate theories and methods and to move out of the laboratories to focus on public and private play spaces, and to talk to game players to investigate how the industry worked.

A number of conferences in the United Kingdom and Finland in the early 2000s brought dispersed academics from different disciplines together to discuss their work. The key questions were "what is a game?" and "what are the most appropriate theories and methods for studying games and gameplay?" There was much debate over whether existing narrative or play theories were more appropriate for the study of digital games. There was talk of academic and disciplinary imperialism and some researchers drew upon simulation, cybernetics, computational, and software theories. The open access online journal *Game Studies* was launched in 2001 with a focus on "the aesthetic, cultural and communicative aspects of computer games" and provides a useful history of key issues in games research; many of the articles document the push for game studies to be established as a separate field of study. Aarseth (2001) in the first issue proclaimed the beginning of game studies. Blogs and websites were another important space for sharing ideas. Castronova (2001) found that a paper on the economics of online games could achieve thousands of downloads on the Social Science Research Network. He was later involved in the launch of the Terranova blog in the United States in 2003, which continues as an active blog. By 2006, the study of games was sufficiently established for Sage Publications to launch the journal *Games and Culture*. The initial articles argue for more academic research on games to counter stereotypes and moral panics. This need continues as the game industry, cultures, and technologies evolve raising new academic, educational, policy, and legal challenges.

From the early 2000s, there were also tensions around the merits of games studies as a separate field, rather than studying games within an existing discipline or in an interdisciplinary research framework. The Digital Games Research Association (DiGRA) was founded in 2002 with Frans Mäyrä, who heads the University of Tampere Game Research Lab in Finland, as its first president. It runs international annual conferences with online proceedings available in an open access digital library and it has contributed significantly to the establishment of a field of game studies. Both of the associate editors of the online games entries have been active in supporting games research at established media and communication professional associations such as the International Communications Association (ICA) and the International Association for Media and Communications Research (IAMCR). A Game Studies Interest Group was established in ICA in 2005 and in IAMCR games research papers can be found in the political economy, popular culture and communication, technology, and policy sections. The European Communication Research and Education Association (ECREA) held a preconference on games and has sponsored a Digital Games Temporary Working Group since 2011. In 2014 a Game Studies Conference was held at the University of Nottingham Ningbo China and games research appears in a range of communications, media, and education journals in the region. Academic job lists advertise positions for lecturers in game design and development or creative/digital media with knowledge of games. Game studies and/or games research is no longer marginal in communications, media, or related academic institutions.

Communication scholars are common in the field of games research. Recent research has found that communication degrees are the most common qualification for games scholars in all the major organizations with a focus on digital and online games research in North America and Europe (Mäyrä, Van Looy, & Quandt, 2013). A survey of games scholars found that of 544 respondents, 16% had degrees in communication studies. Within communication studies, scholars had mass communication, speech, and

journalism majors. People with communications degrees may be employed in other fields so this survey only highlights one element of the relationship between communication studies and game studies. The same study highlighted the multidisciplinary and collaborative nature of contemporary digital games research and found that game studies scholars also have degrees in the humanities, computer science, education, and psychology. Studies of online games often require considerable computer literacy and some of the largest studies of online communities often include scholars from a range of disciplines. The contributors of entries in this Encyclopedia have diverse backgrounds in communication, media studies, and other social sciences (including psychology and education) and the humanities.

Communication scholars have contributed greatly to the study of digital games. They have evaluated the positive and negative effects of digital games and the most insightful work has adapted methods to address the specific challenges that online gaming poses in diverse contexts. They have explored the motivations of people who play online games and found that achievement, diversion, fantasy, arousal, challenge, immersion, competition, and social interaction are important. Indeed, for many players of both MMORPGs and FPS, sociability is an important motivation and people play against peers, friends, and family. Despite findings demonstrating the diversity of player types and a range of player motivations, the stereotype of the sedentary young white male playing at home in his bedroom persists and is mobilized by hardcore industry marketing and regulatory campaigns as well as by the media (Williams, 2003). The label "gamer" is resisted by some players and embraced by others. It varies in meaning from culture to culture. In some instances, it serves to exclude people from the gaming culture, while in others it serves as a core badge of identity. Despite early hopes that online environments would lead to greater freedom from social discrimination and harassment, studies of online gaming cultures suggest that the variety of characteristics of gamers is multiplying and the increased communication possibilities in online games are supporting new forms of social distinction in human interaction in these spaces.

Key Themes in Online Games

The topics are organized around the following themes.

History, development, and types of online games

The treatment of online games starts at the beginning with an entry on multi-user dungeons (MUDs) by Richard Bartle. Bartle was co-creator of the original MUD online game as an undergraduate student at the University of Essex in 1980. His career as both a games developer and games scholar enables him to discuss the role that online text based MUDs played in the development of online games – both as an early prototype and as a popular modern alternative to graphical online games. Holin Lin and Chuen-Tsai Sun provide an overview of the development of an online game genre that has been a dominant presence in the industry and in research scholarship – MMORPGs – and William Bainbridge focuses on *World of Warcraft*, an online game that has enjoyed global dominance in the MMORPG market for more than a decade. An entry from Tanya Krzywinska and Douglas Brown describes this and other online game genres, and Gerald Voorhees reviews a popular online game format, the FPS genre. Another online game format that is perhaps less commercially prominent, but of great social importance, is educational games, which Amanda Ochsner, Dennis Ramirez, and Constance Steinkuehler discuss in their entry.

The Encyclopedia entries also follow the migration of online games from PCs to other devices with Frans Mäyrä's entry on mobile games, and an entry by Annakaisa Kultima on social network and casual games. An entry by Burcu Bakioğlu probes the ever expanding boundaries of online game ubiquity in alternate reality games.

Commercial production of online games

Online digital games present a powerful commercial force worldwide and several entries examine how online games are produced, distributed, and marketed. Others deal with the economic forces that are influencing some online games and the active role of players in shaping game economics and commercial prospects.

Casey O'Donnell describes processes and considerations involved in game development and production. Dal Yong Jin discusses the globalization of online games as the audiences and producers of online games are located in increasingly diverse geographic and cultural landscapes, and Peter Zackariasson examines various game business models that are employed to maximize commercial prospects for different online games depending on their popularity, audience, and structure.

The production and distribution of games are big business, but many online games are themselves host to powerful and dynamic virtual economies, as an entry by Isaac Knowles, Edward Castronova, and Travis Ross explains. Online game users can also enhance – or sometimes undermine – the commercial strategies of games producers by contributing game modifications and user-generated content, as Olli Sotamaa and Hanna Wirman detail in their entry.

Effects of online games

Much scholarship, particularly on popular entertainment media, is concerned with the potentially negative effects of the media, and research on online games is no exception. Several entries consider research findings related to possible social effects of online games – some negative, some positive, some well evidenced, and some very disputed. Marco Skoric and Nathaniel Poor offer an overview of the topic of effects of online games. Other entries supplement this by examining specific effects. The much discussed, but not yet well understood, concern about online game addiction and overuse is examined by Mark Griffiths, and Christopher Ferguson discusses the links between online games and crime. Sara Grimes focuses on research concerning children and online games. Sabine Reich and Peter Vorderer examine immersive online game player experiences that constitute online game encounters and may also enhance other game effects.

Communication in online gameplay

While there has been much scholarly attention on the effects of online game content, a characteristic of online games is that users do not experience games only as a message or stimulus, but as a communication environment within which they can interact dynamically with other users in a range of ways. Esther MacCallum-Stewart details interpersonal player behavior in online games, while Joshua Clark, Alex Leavitt, and Dmitri Williams examine larger-scale community aspects of online games. Wei Peng discusses cooperation and competition in online games, while Torill Elvira Mortensen examines role playing in online games. Tanner Higgin provides insight into a darker side of online gameplay in his entry on racism, sexism, and homophobia in online games. Reviewing research investigating these and other human elements of online games, Florence Chee provides an overview of scholarship dealing with digital ethnography and online games.

Online game players, identity, and cultures

Whether interacting with games or with each other, the backgrounds and motivations of online game players are a key element in the online game social dynamics. An entry by Jeroen Jansz and Joyce Neys details online game player characteristics. Jan van Looy complements this with an exploration of players' complex relationships and interactions in the entry, game characters, avatars, and identity. In gender and feminism in online games, Jennifer Jenson and Suzanne de Castell critique essentialist approaches to gender and discuss how men and women engage with online games and how female players are represented and treated in online games. They discuss the performative aspects of gender and the possibilities of gender based play.

Within the larger populations of online game users many diverse and vibrant cultures of play are buried, with some of these cultures diverging from the intent of their producers. Mia Consalvo discusses cheating and an entry by Greg de Peuter describes the subversive function of counterplay. Other work examines departures from the intended structures of online games such as competing at a high level as a career, addressed in Nicholas Taylor's entry on professional gaming. Nina Huntemann and Matthew Thomas Payne describe how institutions can use online games to recruit and train users for different types of career in online games and militarism.

Regulation and governance of online games

The emerging and evolving technological, commercial, social, and cultural dynamics of online games present challenges with regard to how they should be governed and regulated. Greg Lastowka takes on some of these difficult questions in his entry on legal issues in online games, while Sal Humphreys tackles a range of governance issues and strategies in her entry on virtual world governance. Online games preservation is addressed in an entry by James Newman.

Scholarly Approaches to Online Games as Digital Communication

The entries in the "Online Games" theme draw from a variety of scholarly and methodological approaches to online games as a digital communication medium. This variety is consistent with the breadth of approaches employed in online games research, with different entries tapping into the field from different perspectives and, in some cases, drawing upon multiple perspectives within the same entry, overall enabling the entries to represent the range of ways that online games are investigated. There is also variety in the amount of personal experience with games that informs entry contributors' perspectives; experience playing digital games is not a prerequisite for conducting research related to games, but it can inform research questions, enable the use of more robust research methodologies, and ultimately yield useful arguments and findings.

Experimental approaches

Some of the entries focus on quantitative and experimental social science based research methods and their application to online games. Just as this approach has been a dominant paradigm in scholarship on social questions about communication, media, and society, it is heavily represented in the scholarship on online games that is summarized here. A commonly employed method is the classic experimental design, often used in game research in the form of the laboratory experiment but, on occasion, in field experiments as well. This attention to quantifiable measurement, hypothesis testing, and assessment of explanatory factors is valuable for understanding of online game social dimensions, and is particularly present in research addressing psychological effects of games.

Survey approaches

Survey methods in game research focus on audience measurement using self-reports to examine complex phenomena in large populations. These yield insight into general trends with respect to the demographics of online game populations and game players' motivations, lifestyles, personalities, and the gratifications they derive from online games – and insight concerning those potentially at risk for problematic, over-, or "addictive" use.

Ethnographic approaches

Ethnographies combining a variety of methods have been used to explore a number of research questions in contexts ranging from game development companies, professional industry conferences, "offline," player events in public and private spaces, to e-sports arenas (see also Online Games Development and Production; Professional Gaming). Auto-ethnographies of virtual spaces are used to experience gameplay and explore online communities, and the representations and narratives they co-create (see also Online Games and Digital Ethnography). Some researchers combine both offline and online ethnographies. As the online populations and virtual landscapes and communities continue to grow and become more diverse, ethnographic approaches provide scholars with rich and detailed insights into online games production and play.

Content and textual approaches

A key debate in game studies has been how to adapt content analysis and textual analysis approaches to digital games. A major challenge is how to address the unique interplay between digital game narratives and their interactive structures, which form an unprecedented type of "ergodic" literary artifact (Aarseth, 1997). Scholars specializing in comparative literature,

semiotics, film, and communication studies have adapted theories of genre, representation, identification, and meaning construction to examine games as texts where interactivity, adaptability, gameplay, perspective, and user generated content abound (see also Online Games and Genre). Gameplay is essential in this area of research to inform close readings/playing of games and to examine how meaning is constructed, negotiated, and challenged through game playing. Scholars also have undertaken detailed content analysis of games focusing on their avatars and their representation in games.

Social and cultural approaches

Macrosocial and cultural approaches have served as a powerful and useful complement to the narrowly defined questions and foci of experimental, ethnographic, and textual approaches to online gaming. Some of this scholarship draws upon political economy theory and the sociology of work and organizations to examine the economic and organizational aspects of the games industry and quality of life issues of its workforce (Kerr, 2006). Others look to continental poststructuralist theorists to examine the games industry as a contemporary example of empire and militarized masculinity (Dyer-Witheford & de Peuter, 2009). Related work excavates the relationship between the industry and the military, particularly in the United States (see also Online Games and Militarism). In recent years, scholars working in the cultural studies tradition are drawing upon cultural theories and methods to examine how games are associated with the preservation of hegemonic relationships or as a tool for subverting and challenging dominant ideologies. Feminist scholarship adds a further dimension to this work by focusing on the gendered structure of the industry, its technology, gameplay, and games. Such scholars problematize the sex/gender distinction and point to the equality issues raised by the intersectionality of gender, sex, race, and class for online gaming (see also Online Games, Gender and Feminism in). A critical-cultural perspective also informs research examining cultural hybridity and glocalization practices in the industry as well as providing insight into how subcultures of play are constructed and negotiated (see also Online Games, Globalization of; Online Games, Player Behavior; Online Games Modifications and User Generated Content; and Online Games and Counterplay).

Legal and policy related scholarship

The complex and vibrant communities that online games engender also attract the attention of legal and policy scholars. Many commercial online game providers claim intellectual property rights over the content of their online games including the creative content produced by the game players. Online games have rules that govern player activity within games, but there are questions about the point at which (if any) players can assert control over their virtual spaces. This raises issues about how these spaces are governed. In almost all online games, some virtual activity is allowed or encouraged that is deemed to be illegal in the "real" world, such as theft and murder. Games such as CCP Games' *EVE Online* go further, allowing players to engage in theft and fraud, robbing players of virtual resources with "real-world" currency value. Are these acts crimes in a legal sense? What happens when an online game crosses national boundaries and legal jurisdictions? These and other legal questions are novel and complex and call for creative application and adaptation of legal scholarship. Communication and media scholars with an interest in policy issues also contribute, for example, by exploring bottom-up negotiations and struggles between game companies and their online communities and forms of governance that they give rise to (see also Virtual World Governance). Other work examines issues around player privacy, data protection, advergames which target children, racist and sexist speech in games, and age classification and content rating systems in various jurisdictions.

This discussion highlights the variety of methods and theories that studies of online games draw upon. There are numerous opportunities for collaboration which have been elusive in previous media scholarship. Experimental or content analyses of how male and female characters are represented in video games, for example, are complemented by more macro analyses of game production, users, and contexts, and the ideologies that guide an industry and culture

that traditionally have been dominated by a male perspective.

Emergent and Future Research

Several emerging trends in scholarship on digital games can be identified.

Games as a service

There is the shift away from the game as a one-off media product or performance and toward games as a consumer service. Before the advent of commercial online games, video games were purchased at arcades one session at a time, similar to a cheap and brief version of a movie or live performance ticket. As the market for digital games for PCs and home consoles grew in the late 1970s and early 1980s, games were purchased initially as a physical media product, much like a vinyl record, cassette tape, or optical disk. With the arrival of online games, the consumer is likely to purchase games as a service, much like a cable television or internet access subscription, and to maintain an online game playing identity account across multiple platforms.

The success of early efforts at a service based subscription model for digital games mirrored the commercial growth of internet service providers, but with online subscriptions and online game use now prevalent in many countries, players are increasingly likely to pay a fee for continually updated game content and for live interaction with other players. Home console games purchased as physical media products are often used in conjunction with online subscription based services and game producers are requiring players to have a live internet connection to play an "offline" digital game in order to thwart software copyright infringement. This trend has implications for the nature of the text, the game playing experience, the economics of the industry, support of the online community, and the rights of game players. It also has implications for the preservation of games as socially important artifacts. The speed of transformation of consoles and platforms is leading to problems in finding playable versions of games that accurately replicate the gameplay experience of the original game. Challenges of digital game preservation and archiving are exacerbated by digital rights restrictions and other intellectual property restrictions on use that may hinder access to game content, records, and code when commercial providers no longer find it profitable to maintain the games.

Globalization of online games

The globalization or spatialization of the games industry is raising new questions for research. Many digital games are developed for non-Western markets and South Korean and Japanese companies have had a major influence on the development of the industry and online games culture. Many of the leading companies in the West have links with, or are part owned by, Asian companies, which is challenging researchers to revisit academic theories and concepts inherited from the study of movies, television, and music in international markets (see also Online Games, Globalization of). In relation to community support for MMORPGs, jobs are being located offshore or near major markets with native language speakers hired to interact with game players. Game development companies are moving to locations where governments are offering attractive financial and labor market incentives or incentives to companies to develop particular types of content. The globalization of the online games industry is fostering new locational strategies and production practices which are encouraging the study of glocalization and hybridity of online games in the transnational marketplace.

Game data, privacy, and surveillance

As online game audiences and game technical sophistication increase, legal and ethical challenges are emerging regarding players' rights in virtual environments where their behavior and identity can be observed. As alternatives to subscription based service models gain in popularity, player information is becoming a valuable resource for game companies for design and marketing purposes. This is raising questions about the extent to which online consumers can be assured of their privacy rights. Many online games offer ostensibly free access, particularly to young players and users of "casual" games, but in

lieu of a subscription fee, may provide targeted advertising or harvest player information for sale to third parties.

Data collection and segmented marketing are becoming increasingly sophisticated as game owners integrate rich sources of personal information gathered from social networking sites and behavioral surveillance tools such as camera based game controls. Even in games where player information is not used for marketing purposes, data on player behavior may be used to identify players with substantial social influence (positive or negative) for targeted incentive programs. With the online games industry becoming increasingly competitive and reliant on diverse methods of generating revenue from players who are not paying fees for game access, there are many opportunities for research concerning the impact of revelations that national governments are making requests for information and gaining access to transnational player data. The impact of these practices on the boundaries of online privacy and their production and use of data is likely to be a concern for both game producers and online game players.

Online gaming as profession and performance

While the stereotype of the lone video game player is in many ways invalidated by the presence of active social communities in online games, online game player social behaviors extend beyond synchronous interactions within virtual spaces as online game performances, themselves, become spectator events. The most extreme form of online gaming as a public spectacle is the e-sports phenomenon, examples of which range from organized competitive tournaments to televised professional leagues. There is also a growing range of ways in which online game players use video recording, editing, production, and dissemination tools to produce and share content from live and recorded gameplay sessions. These player produced video game products include live and recorded gameplay webcast sessions, video "walkthrough" guides, narrative "machinima" productions using rearranged and dubbed video game footage, and other creative repurposing of game content. These forms of performance and production are indicative of a trend in game culture wherein players can use the video game medium to generate their own messages and augment their social status and material wealth. This changes the role of the player from that of a consumer of game content to a participant in the game industry's production process, a development that deserves future research.

Online games as a "virtual" behavioral research lab

While social phenomena related to online games and their players are worthy of study in their own right, a growing trend in scholarship is the realization that online games can be used to learn about human behavior generally – especially if studying human behavior in "real" spaces might be obtrusive, unethical, or dangerous. Based on the idea that social behavior in mediated contexts and social responses to computer controlled agents may mirror – to an extent – social behavior among people in nonmediated settings, research tends to confirm that observed behavior in online games often parallels unmediated social behavior. In some settings, online games may serve as a useful setting in which researchers can study phenomena ranging from economic behaviors to epidemiology, thereby informing understanding of "real-world" social issues, problems, and remedies. It is not yet clear, however, when online game behaviors "map" well onto "real-world" phenomena and when there is likely to be little correspondence.

Games for social change

A growing trend in scholarship examines the potential of video games as a tool for positive social change. While efforts to develop overtly educational games date nearly as far back as the commercial games industry itself, with mixed results, scholars and organizations have pursued the promise of video games for encouraging prosocial behavior in their players. The popularity of research on games that may encourage health benefits is evidenced by competitions for funding of research on health promotion through games, and by the founding of the *Games for Health Journal*, in 2012. Research in this area uses terms such as "serious games" and "gamification." Anecdotal successes and potential mechanisms

for achieving prosocial game effects have been identified, but a comprehensive understanding of how game popularity can be harnessed for the public good is a work in progress. Game players are pursuing methods of encouraging social change within games, such as through "countergaming" to subvert a game's ostensible purpose and through the spread of social activists' messages within game environments (Galloway, 2006).

Conclusion

This overview of online games entries cannot do justice to the rich insights and expertise available from them. The entries provide a valuable resource as a collection and as separate entities. We, as authors of this overview entry, have gained much knowledge from reading and reviewing the entries. The emergence of games as a service challenges us to revisit this work, to rethink our methodological toolkit, and to take a more transnational approach to our research. The entries raise new legal, moral, social, and political questions. They also inspire new research, educational, and business opportunities. We hope that this resource is a useful starting point to enable readers to learn about the role of online games in societies to date – one that will inspire readers to conduct scholarship that adds to the knowledge that is collected here.

SEE ALSO: Alternate Reality Games; Educational Games and Outcomes; Massively Multiplayer Online Role Playing Games (MMORPGs); Mobile Games; Multi-User Dungeons (MUDs); Online First-Person Shooter Games; Online Games, Addiction and Overuse of; Online Games and Business Models; Online Games, Casual; Online Games Characters, Avatars, and Identity; Online Games and Cheating; Online Games and Children; Online Games, Community Aspects of; Online Games, Cooperation and Competition in; Online Games and Counterplay; Online Games and Crime; Online Games Development and Production; Online Games and Digital Ethnography; Online Games, Effects of; Online Games, Gender and Feminism in; Online Games and Genre; Online Games, Globalization of; Online Games, Legal Issues in; Online Games and Militarism; Online Games Modifications and User Generated Content; Online Games, Player Behavior; Online Games Player Characteristics; Online Games, Player Experiences in; Online Games Preservation; Online Games and Racism, Sexism, and Homophobia; Online Games and Role Playing; Professional Gaming; Virtual Economies: Origins and Issues; Virtual World Governance; World of Warcraft

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