

Media Discourse surrounding game regulation,
Online Game community and Gamers' Participation

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ABSTRACT

This study examines how the issue of game regulation has developed and influences public perception by exploring ideologically differing media outlet's distinct use of frames and sources as well as how games, game play, and game related activities shape the social and political behavior of gamers in the Korean context. While media representation of gaming and gamers is mostly negative, this study examines prosocial aspects of gaming such as the democratic potential of games and gaming communities, including the conditions in which gamers are or become politically conscious. In particular, the contribution of games as a community building and social learning space and various prosocial gamer behaviors to participatory behaviors will be discussed. This study attempts to expand the previous research on the potential learning and fitness benefits of gaming to political contexts by providing evidence on Korean gamers' social participation as the most important expansions of gamers' citizenship rights and the motivation for policy change.

The most significant findings of current study include: (1) media relies not only on elites' sources and frames but also interacts with social actors or interest groups regarding game issues; (2) mainstream media was ambivalent about game issues and tended to define gaming and gamers in sensationalistic ways (violence/addiction); (3) while the dynamics of media effects on public attitudes towards game regulation are complex, exposure to game related news content significantly impacted public attitudes; (4) media discourse operates as a mobilization cue for

gamers and potentially encourages them to further action; (5) gamer's communicative ecology (game genre, media, game co-playing, game discussion) and community activities under the communication mediation model play a significant role in the democratic procedure and citizenship of gamers; (6) participation in game cultures (socialization via game playing) fosters collaboration (guild experience, community involvement) and potentially leads to sociopolitical consequences under the unique environment of game play; and (7) social capital garnered through game play as well as self-identification as a *gamer* has sociopolitical implications that positively contribute to online and offline participation.

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CHAPTER 1. INTRODUCTION

In the US, game industry contributed \$11.7 billion in value to US GDP with the direct employment of 65,678 Americans, and \$30.4 billion in consumer spending in 2016 (Entertainment Software Association). In Korea, game industry was estimated to be worth \$9.48 billion USD with the export of \$3.21 billion in 2015 (KOCCA). The total sale of game industry exceeds music and movie industry. In 2015, approximately 885 active game development or distribution firms operated in Korea, with a total of 35,445 individuals employed in the firms. While game industry significantly contributes to the national economy both in the US and Korea, the government elites in Korea regulate games and game playing.

The international audience was puzzled by Lee's behavior: During the 2012 Global StarCraft II League World Championship, the 15-year-old Korean professional gamer chose a reckless strategy that caused him to lose a championship that he had been handily winning. Afterwards, when Lee was asked why he had made a decision that would almost assuredly result in a loss, he commented that he had no choice but to push the game forward regardless of the probable success or failure of his strategy. Why? He was facing being locked out of the game due to Korea's Game Shutdown Law.

The Lee case vividly illustrates how game regulation in Korea is applied. The policy has been shaped by purported negative impacts of games, such as violence and addiction, and academic research has not been an exception to this line of inquiry. Studies are largely focused on defining a causal relationship between game playing and violence (Anderson & Bushman, 2001; Anderson & Dill, 2001; Barlett & Anderson 2013; Bushman & Anderson 2002, 2009; Carnagey & Anderson, 2005; Carnagey et al., 2007) and game play and addiction (Griffiths, 2010, Hussain, Griffiths, & Baguley, 2012; Kuss, & Griffiths, 2012; Van Rooij et al., 2010; Van

Rooij et al., 2011), or disapprove the idea of any correlational or causal relationship between violent game play and violent behaviors (Ferguson, 2007; Ferguson, & Kilburn, 2010; Ferguson, et al., 2008).

Moreover, communication studies find negative consequences to a preference for entertainment over news on political aspects, such as efficacy, knowledge and participation (Prior, 2003; Scheufele, 2000; Scheufele & Nisbet, 2002). On this issue, debate has been stirred in several domains including psychology, media studies, and law studies. Meanwhile, few studies have focused on the interaction between media and policy with regard to media discourse and public opinion concerning game issues or the sociopolitical roles of game playing and their impacts on participation.

Both the public and officials rely upon the news media for central functions of communication (Cook, 2001). Media has been the crucial information source on game controversial issues, and the public tends to shape attitudes toward regulation, gaming, and gamers based on their media consumption. In this logic, analyzing media representation of game issues, what logic different media outlets use for presenting their position, and what sources of information or opinion each media cites are important to understanding the complex dynamics among various actors in constructing game regulation and public opinion.

The flow of media discourse on game regulatory issues in Korea tends to show strong elites' influence on the news making process. Once the elites construct frames based on negative implications toward games, media report the issues based on elites' perspective (Habel, 2012); in turn, groups of opposition, other group of elites, later construct alternative frames and media respond to them. Within this dynamic, the media has become a proxy battlefield between two opposing groups, rendering the coverage of game regulatory issues political or at least

contentious. In addition to reporting on regulatory issues, media also report on supposed game related social problems, namely that excessive game playing (*addiction*) causes social problems (*violence*). By reporting these issues, media compete with each other over the attribution of such problems, mainly attribution of games vs. other factors.

Though it will be discussed more thoroughly in Chapter 2, when we examine how news media construct their positions of game regulation, they compete based on their ideological tendencies, that has been considerably affected by the realpolitik of regulation. Yet, the general position of the media may not fully capture the political position of news media – not only the overall position but also the salient logic (frames) that support or oppose the position needs to be examined in constructing media opinions toward game issues. Moreover, the information source (journalists' beats) reflects the ideological tendency of news media and perspective of various actors. Thus, the notion that external forces and groups (news source) influence the process of shaping public discourse about an issue by establishing predominant labels (frames) helps in understanding the big picture of game controversy (Gamson & Modigliani, 1987).

As an analytical strategy for studying media content, the current study aims to analyze the relationships among media, political actors, and public opinion by focusing on the role of journalists in constructing social reality through their framing strategies. Like the argument of Bennett and Iyengar (2008), I assume that institutional dynamics between the state (particularly politicians and the government; the Ministries) and the press, such as indexing and news institutionalism and media effects (especially framing), continue to play an important role in the formation of public opinion surrounding game issues. Since media play a key role in shaping and elucidating policy development in competitive or conflicting political contexts (elites' and groups' competition), exploring media attention regarding the game controversy and the frames

of reference deployed to cover the controversy contributes to an understanding of the social reality generated by the media reality.

Specifically, I apply a traditional media effect paradigm in analyzing the media effects on the public regarding the game controversy; the media effects as an influence model that shapes attitudes, beliefs, and behaviors while enforcing or influencing policy (on the institutions) by sharing common goals and an indistinctive concept. Strong mechanism of media effects that the current study followed describe that media effects are shaped by political elites in the discourse of game regulation, and media serve as a mediator that has an impact on the public. This notion offers the model that elites serve as source or provider of media contents. The contents of news influence public opinion by providing classification schemes or categorizations that are “central to political maneuvering and persuasion” (Edelman, 1993, p. 232). Consequently, the public becomes the target of such constructed contents, especially as reviewed in the current case study.

While I follow the notion of Chaffee and Metzger (2001) that “studying the techniques and effects of mass communication will continue to be applicable in the new media environment” (Chaffee & Metzger, 2001, p.378), I also leave room for the potential reverse effects of public opinion or media institutions. I also adopt the notion that “politics, media coverage and public opinion are interconnected” (Jacobs & Shapiro, 2000, p. 65). Thus, to test the institutional model and whether a reverse effect has a minimal or significant role in game regulation, I analyze both top-down aspects that underline elites’ perspective on the way content of media are produced and affected to the public as well as the reverse effects from journalists, interest groups, academia, or public.

In this regard, Chapter 2 examines ideologically different media’s distinct use of frames and sources in different periods of time to analyze the discourse of media on game regulation. By

linking news contents and public opinion analysis, Chapter 3 investigates the influence of media on public's perception toward game regulation, especially what role media frames and negative slant reporting have on influencing public opinion on game regulation, based on the results of news content analysis found in Chapter 2. As well as public opinion toward game regulation and perception on games, I test a support of institution with regard to the frames that the public is most exposed and the sources that journalists rely on in this issue.

Analyses of news contents and public opinion involve a) communication processes regarding institutional or organizational approaches on the political construction and distribution of messages within a sociopolitical system and b) mechanisms of media effects on public opinion. By combining the macro or sociology of news/public relations and the micro of individual or psychological impacts of media (Bennett & Iyengar, 2008), the current study draws a comprehensive picture of both social and individual level of formation of media discourse and its impacts.

In Chapter 4, I examine the role of games as a community building mechanism and social learning from the perspective of communication studies to provide insight into an aspect of (online) gaming that is grossly underrepresented in academic literature. The consequences of this imbalance are not trivial. In fact, when the Korean government elites and the majority of congress members passed the game regulation laws, they did so from the perspective of gaming as an antecedent to violent behavior and addiction. Young gamers were the justification for and subject of the regulations, which assume docile and politically incapable bystanders who have a low level of political information and a lack of both motivation and willingness to participate in real politics. In this study, I reconsider the biased media perception of gamers as a socially isolated, violent/addictive, and politically indifferent group by providing empirical evidence on

the political role of gaming and gamer sociopolitical behavior.

I view gamer social participation as an expression of or a learning about politics, citizenship, and the democratic decision-making process. Such participation may lead to changes in the tone of political debates, governmental institutions (by creating new institutions in response to activists' demands), or policies (Meyer, 2003). In this regard, gamer social participation may initiate substantive expansions of citizenship rights (civil, social, and political), and motivations for policy change (Andrews, 1997; Meyer, 2007). The main goal, however, is not to purport the logic or mechanism of gamers' movements *per se* but rather investigate the political roles of games in mobilization: gamers as political actors who are interested in a specific political issue (media regulation), organize networks and build community by creating their unique identity, and act upon government-led policies that lack a democratic process and social consensus.

Expecting that activities in game communities may play an influential role in participation, is it still valid to take a 20th century view of games simply as a form of passive entertainment that negatively impacts gamer participation in society in general or politics in particular? Classic definitions of games as entertainment only may not reflect the realities of a new form of participatory digital entertainment and its potential for democratic citizenship. Moreover, the primary activity of game playing might result in social interaction, such as building and participating in a democratic community, rather than spending time passively.

Based on this logic, the goal of the Chapter 4 is twofold. First, at the macro level, what impacts of the politicized game regulation, especially media discourse on this issue, are brought about by gamer participatory behavior? Second, at the micro or individual level, are games potentially considered a social simulator that helps people connect with each other, share

emotions and ideas, discuss sociopolitical issues (community-collective intelligence), and consequently affect social and political attitudes for democratic citizenship? Can game playing provide political or civic learning opportunities? And, by engaging gamer communities (as a gaming public sphere), do gamers develop into politically conscientious or aware gamers, allowing them to become more civic minded citizens?

In analyzing the comprehensive roles of games, the current study faces two challenges: one is the methodological approach and another is the theoretical foundation. While previous literatures that discussed the social roles and social impacts of games have their own values on expanding the sociopolitical roles of games, none of the studies have examined the holistic aspects of gaming and dynamics of the gamer communication environment. In the gaming world, the potential logic of community building and participation would be that the sociopolitical information available in gamer networks and communication in game forums lead gamers to become more informed and aware of social issues. Studies examining the learning or civic effects of game playing have argued that gamers learn from social interactions with others and build communities for social life (Steinkuehler, 2005; Steinkuehler, 2006; Williams et al., 2006b; Squire, 2010). The unique environment of game playing allows gamers to experience sociopolitical structures, and active participation in game cultures encourage confidence in learning and cooperativeness (Squire, 2010). This participation in games may be considered a new platform for the learning environment (games' educational role or *gamification*). Consequently, gamers may become more inclined to discuss issues and more likely to participate in real life politics while also building mutual trust or social capital (Jenkins, 2006; Williams, 2006; Martin & Steinkuehler, 2010; Kahne et al., 2013).

To support the notion of games as political and civic community building platforms, I

explore the relationship between gamer's communicative ecology (which is conceptualized on the idea of communicative ecology (Foth & Hearn, 2007) that includes *game genre, media use, gamers' social networks, and game discussion*) and community activities and learning (that involve *community involvement, community sense of belonging, gamer self-identification, trust in gamer, and perceived game learning*) for participatory behaviors under the media effect paradigm (Bennett, 2008), especially the communication mediation model (McLeod et al., 1996; McLeod, Scheufele & Moy, 1999; McLeod et al., 2001). Applying the communication mediation model to gamer behaviors allows us to understand the predictive power of not only conventional media and talk but also various game related variables and the potential role of gamer communities as a networked public sphere and mobilization. Moreover, the model offers insight into the holistic picture not addressed in previous studies.

As a theoretical basis of the sociopolitical aspects of games, I apply literature of new media's democratic and social potential (Jones, 1998; Benkler, 2006; Bimber, 2003; Xenos & Moy, 2007; Mossberger, Tolbert & McNeal, 2008; Rainie & Wellman, 2012). The democratic potential of new media studies has widely explored and evaluated possibilities that were previously ignored in theories of the decline of civic life (Putnam, 2000) and communal spaces (Oldenburg, 1997) as well as concerns for the disability of online communities for supplementing existing communities and social relationships (Nie & Erbring, 2000; Nie & Hillygus, 2002). By playing games and engaging game activities, gaming allows gamers to enhance opportunities for building communities and encouraging participatory behavior; the results of such behaviors are closely related to the positive impacts of new media on community and sociopolitical consequences.

In this sense, games emerge as new forms of digital media that potentially play

sociopolitical roles. As well as the positive impacts of new media on politics, I propose the mobilizing aspects of games based on individual networked action and cultural aspects that the previous literatures have not considered. Even though the game regulation issue has become politicized with the help of institutional influences (mostly government institution and politicians), self-organized action via new media technology plays important roles in mobilization, and thus the role of individual networked action co-exists with institutional elite politics: Game community involvement as networked participation and community belonging (*sense of belonging* and *gamer self-identification*) as cultural aspect of mobilization are mixed with influence of new social media on individual level participatory behaviors (gamer as a social actor and democratic citizen) and institutional politics (both online and offline political participation).

As the unique contribution of the current study, firstly I examine how media discourse on game issues has developed over time as an in-depth introduction of sociopolitical contexts in Korea and media influence on public attitudes toward games. In particular, an interesting yet complex relationship between the realpolitik of the gaming issue and the ideological tendencies of media-mainstream media's ambivalent or dualistic attitude toward game issues is discussed based on media frames, sources, and attribution of social problems. The study suggests that, while media rely on elites' ideas and sources, an interplay between journalists and social actors also play an important role in game regulation.

Second, I examine additional linkages between the influence of media discourse and gamer participatory behavior. By analyzing news contents, I explain how media discourse on game controversy has formed via complex political relations and then, by providing public opinion data, I analyze media impacts on public perception towards game issues. In addition to

perceptual effects of media, the current study elucidates behavior consequences of media by narrowly examining the impacts of media contents, namely frames and sources of ideologically different news, on gamer participation. I argue that the logic or opinion of the cited groups and their action may influence readers. For instance, news that reports opinions of civic organizations that endorse collective campaigns or behaviors to promote games' cultural aspects may operate as a mobilization cue for readers and potentially encourage them for further action.

Third, I take one more step on the role of games on democratic procedure or citizenship with regard to the effects of gaming as learning or community building. For instance, as well as MMORPGs (e.g. *World of Warcraft*) (Steinkuehler, 2005; Steinkuehler, 2006; Williams et al., 2006; Squire, 2010), I expand on the social contributions of Artificial Intelligence (AR) games (e.g. Pokémon GO); the unique characteristics of the AR genre (and AR players) on game community involvement, sense of belonging, and participation. Together with the AR genre, I also extensively analyze social/political behaviors of the RPGs, AOS and Strategy (RAS) genre under the communication mediation model.

Fourth, I expand the role of game related media and game discussion in mobilization. I seek to answer whether gamers view game issues as a political matter and perceive media (especially game related information sources) for surveillance purposes. If game related media and game discussion enhance gamer social behaviors, the role of game related information sources and game discussion can be expanded to deliberation. Thereby, I analyze sources of information, not only traditional vs. online media (medium-specific) but also issue specified media (online webzine) and ideological tendency of media. Regarding medium-specific outlets, in-game quest or in-game chatting that previous studies have not explored will be added as a source of game news information. In addition to the media, I examine the role of discussion

about game issues (instead of political talk) that most communication studies have not investigated.

Fifth, I explore the role of the gamer's communicative ecology on community building and participatory behaviors to capture the comprehensive roles of games (see Figure 3&4). As an analytical strategy, I apply the gamer's communicative ecology and game community activities (including community involvement, sense of belonging, and perceived game learning) under the communication mediation model for participatory behaviors of gamers: to what extent game genre influences media use and how these variables affect game co-playing and game discussion will be analyzed. In this process, dependent variables in the preceding models are treated as independent variables in the final models to trace the change of effects when each variable is entered in the model.

By implementing the above strategy, this study enables the dissection of the role of gamer's communicative ecology and game activities as antecedents of various participatory behaviors. Not only conducting a model for gamer participation for the sake of gamer interest but also assuming that gamers engage in various participatory behaviors, I explore the relationships between game playing activities and online/offline participations as well as whether gamer's communicative ecology and game community/learning experience contribute to those activities. Examining if the gaming experience or activities in games significantly contribute to sociopolitical engagement, the current study expands the model of gamer participation, gamer's communicative ecology and game community/learning experience, to the realm of conventional communication studies.

Sixth, the study both compartmentalizes gaming social capital (operationalized as community involvement and community sense of belonging in the current study) and expands

the concept of gamer social capital to better understand various aspects of gamer social connections. I separate a single idea of gaming social capital (Molyneux, Vasudevan & Gil de Zúñiga, 2015) into gamer community involvement and community sense of belonging in order to explore both behavioral forms of communication and psychological aspects of gamer communities.

In expanding gaming social capital, I follow Rojas and his colleagues' (2011) notion of communicative social capital that discussion networks and mass media as important nodes for an integrated communication system. Applying the concept of communicative social capital to gamer communities offers a new way of understanding community involvement and belonging as a communication structure based in communal and personal linkages (Rojas et al., 2011).

Seventh, the implication of gamer self-identification and its role on participatory behaviors will be examined. As Chapter 2 demonstrates, media representation on games has largely been biased towards sensationalism: violence and addiction. The Korean government criticizes the RAS genre in particular for violent and addictive behavior, stigmatizing RAS gamers as socially isolated game addicts, and as such the genre is still under the regulation. If game players of the targeted genre specifically perceive themselves as *gamers*, and gamer self-identifications participate in social action, the concept of gamer self-identification may go beyond gaming enthusiast and may have sociopolitical implications. This concept allows us to fully capture the relationship among media representation, government action (regulation), game genre, and participation.

In the concluding chapter, I summarize the results of study and key findings of previous chapters, address limitations of the current study, and make suggestions for future study. Moreover, I address the new direction of game policies based on the results of media content

analysis and public opinion surveys. Though this dissertation extensively discusses the prosocial aspects of gaming, potential harmful effects cannot be ignored. Game experts from various fields commonly argue that mutual understanding among the government, industry, and public is the first step to resolve this controversy. This dissertation suggests the important role of the media and a communicative approach to game policy. I suggest that an identical approach of campaign or policy may not work in the complex ecology of gaming. Based on in-depth insights that the current study offers on the unique characteristics of game genre and behavior characteristics of gamers, such as media consumption, networking, and interpersonal communication patterns, I propose that policymakers would greatly benefit from a deeper understanding the nature of games, gaming activities and gamer's communicative ecology to maximize societal benefits of gaming while preventing harm.

The sociopolitical context of game regulation

Game Regulation in South Korea was first initiated by a group of NGOs (2004) in the name of protecting an adolescent's right to sleep; a policy predicated on the assumption that the gaming industry was violating the rights of adolescents in this way. The following year, a ruling party Congressman, Kim Jaegyeong, proposed The Game Shutdown Bill (2005). The Juvenile Protection Act, which included the Game Shutdown Bill, was revised to specify a target age, timeframe, and insertion of a warning message on the supposed danger of game addiction. In 2010, two leading Ministries, the Ministry of Gender Equality and Family (MGEF), which supported the bill, and the Ministry of Culture, Sports and Tourism (MCST), which opposed the bill, agreed on banning children under 16 years of age from accessing online games from midnight to 6 am. In 2011, The Juvenile Protection Act passed by a relatively substantial margin

(Pro 118: Con 63: Withdraw 29). In October of the same year, enforcement of the law commenced. Nevertheless, groups opposing the regulation proposed a Constitutional Petition against the Game Shutdown law.

In January 2012, the MCST alternatively proposed a new game policy, the Selective Game Shutdown law, which states that parents can request game companies limit game playing time for children under the age of 18, and game companies are required to report a child expenditure and game playing time if the parents' request it. Online game companies offering educational content would be excluded from the shutdown, yet the nation's 100 most popular online games would be subject to it. Since the Selective Game Shutdown law was implemented on July 2012, the Korean game industry has faced double regulations on different target ages and parental roles.

The following month, the Ministry of Education (MOE) and MGEF proposed a Cooling Off bill that would forbid adolescents from playing online games more than two hours consecutively and not more than four hours a day; however, the bill was abrogated. At the beginning of the 19th National Assembly (May 2012), the Ministry of Government Administration and Home Affairs (MGAD) entered the playing field of game regulation issues, proposing a bill for Periodic Preventive Education for Internet Game Addiction, which stated that national or local governments, are required to establish an Internet Addiction prevention institution and provide counsel and treatment for those who are addicted to the Internet.

Since 2013, Korean politicians have actively engaged in gaming issues. Congressman Jeon ByeongHeon, from the opposition party, became president of E-Sport (January), and Congressman Nam Gyeongpil, from the ruling party, obtained a position as the president of Game Association (now Korea Internet & Digital Entertainment Association; K-iDEA).

Moreover, gaming has become a hot-button issue at the National Assembly Inspection, when two Congressmen proposed controversial game regulatory bills.

In 2013, the ruling party Congressman, Son Inchun, proposed a bill, “Funding for Prevention and Treatment of Internet Game Addiction,” which authorized the MGEF to collect funds from game companies with the logic that it was compensation for the social cost of game addiction. On April 2013, the ruling party Congressman, Shin Uijin (a psychiatrist), proposed The Game Addiction Bill, stating that online games are as harmful as alcohol, drugs, and gambling and should be regulated by the government in the same way as other substances and situations with high addiction rates.

Table 1: Game Regulation Timeline

2004	2005	2010	2011	2012		2013	2014
	Game Shutdown		Selective Shutdown		Cooling off	Game Addiction	
Initiated	Proposed	Agreement	Commencement		Abrogated	Proposed	Suspended
NGOs	Kim	MGEF & MCST		MCST	MOE	Son & Shin	
	1st period		2nd period			3rd period	

Due to The Game Addiction Bill, the Ministry of Health and Welfare (MHW) got involved in the game regulation dynamic as a key governmental administration for preventing and treating game addiction. In addition, the MOE supported Shin’s bill, arguing that excessive gaming, online gaming in particular, caused addiction and resulted in teenagers engaging in school violence and juvenile delinquency. As a result of the unconstitutionality suit against the Game Shutdown law (2011), the Constitutional Court has ruled the law to be constitutional

(2014). In addition to the Game Addiction bill, the Court's decision caused severe conflict between groups supporting and opposing game regulation laws. While the gaming issue received attention from both the political scene and the public, many politicians also expressed their position on game regulation and associated with interest groups and NGOs. Unexpectedly, in October 2014, a proposal by Congressmen Son and Shin was postponed in the National Assembly Inspection. While the Game Shutdown (2011) law was passed, the Game Addiction (2013) bill was not; thus, the two opposing groups have increased and political dynamics shifted.

Based on key events and proposed bills, the current study divides the timeframe into three periods based on the framing development process (Scheufele, 1999). The first period (from 2004 to 2009; development of game regulation) involves increasing public awareness to problematic game playing. The second period (2010 to 2012; Game Shutdown law) highlights the MGEF and pro regulation associations' efforts to frame excessive game playing as a major contributor to violence and social problems (establishing causality between game playing and violence/addiction), while laying responsibility on individual gamers (Iyengar, 1987). Such framing efforts (or *crafted talk*; Jacobs & Shapiro, 2000) may maneuver public opinion/perception. In the third period (2013 to 2015; Game Addiction law), supporting groups further framed excessive game playing as a major addiction akin to drugs, alcohol, and gambling.

Opposing groups made a concerted effort to alter the frames of MGEF's game violence in the first stage (Gruszczynski & Michaels, 2012) by emphasizing the absence of empirical studies citing a causal relationship between game play and aggressiveness, or other negative effects on children, while highlighting the potential positive effects of game play. However, as soon as the MGEF proposed its gaming equals addiction paradigm, the media followed the former president

who supported game regulation and the MGEF (Boydstun, 2013). In the meantime, the MCST frame, which depended more on an understanding of science instead of kneejerk reactions, failed to gain momentum in the media. In the second stage, as a response to the addiction paradigm, the MCST attempted to attack the MGEF by advocating games as freedom of speech (artistic creation/cultural expression) or citizens' rights to play games, while focusing on the cultural contribution of the digital content industry as a vibrant and positive aspect of the Korean culture. Moreover, the MCST has conducted studies that criticized the effectiveness of game regulation and released the results to the media. Additionally, the MCST publicized their concerns about the harmful effects on the gaming industry due to the regulation itself and distorted public perception of gaming as a source of violence and addiction, calling into question the constitutionality of the regulation.

However, researchers find it challenging to define or measure gamers' immersive or addictive status as there is no formal diagnosis or definition of game addiction in the medical or psychological literature. As a result, scholars from various academic disciplines apply inconsistent operational definitions when conducting research on gaming issues. The validity of each scholar's measurements and different perspectives on the impact of games hinder a generalized conception of the phenomenon of gaming. Thus, based on different views on excessive game playing, scholars from various fields of study empirically and qualitatively measured and analyzed this concept as either immersion or addiction. Moreover, the political-economic context adds another layer of complexity. Specifically, the notion of online games as a violent or addictive medium heavily affects the government's policymaking process regarding prevention of gaming addiction vis-à-vis prohibition of extensive game playing. While government regulation of online games relies on academic or medical results, those who intend

to prevent game addiction and the online game industry have a conflict of interest in interpreting these results. The game industry has been growing significantly over the last decades, but government regulations have not kept pace. At the same time, concern has grown about online game-related crimes based on sensationalized media reporting.

Mainstream media outlets have reported numerous incidents linking excessive game playing and crime. Such cases include the story of a mother who played online games at an Internet cafe for 12 hours a day, neglecting her infant so severely that the baby starved to death. An excessive game playing father starved his 28-month-old son to death; an excessive game playing mother killed her three-year-old son. Another incident concerned a game playing teenager who murdered her mother and then committed suicide. In this same context, a teenage gamer committed suicide after being reprimanded by her mother to stop playing games. In yet another, a game playing 20-year-old man committed homicide with no apparent motive. However, we have historical evidence that similar types of tragedies occurred before the invention of gaming. As the popularity of gaming continues to expand exponentially worldwide, the importance of forming an objective and comprehensive perspective of the potential drawbacks and benefits of gaming becomes apparent.

Data and Methods

This study relies on mixed analyses, including news content analysis and online survey data. In order to analyze news frames and sources, media coverage in the period between 2004 to 2015 was surveyed for relevant news outlets using five keywords: “Game Addiction,” “Game Shutdown,” “Game regulation law,” “Cooling Off,” and “Game Regulation.” Using the Kinds (www.kinds.or.kr) news media search database by Korea Press Foundation, eight daily newspapers were selected, and for the major conservative newspapers, Chosun and Joongang,

data collection through each website was used as these two newspapers disallow searches through Kinds. Two digital media (Blotter and ZDNet Korea by CBS Interactive) and two gaming webzines (Game Mecca and thisisagame.com) were also included in the data collection process. The issue of gambling, speculative games, and web board games were excluded from the search. With Kinds search, the keyword “Game Shutdown” resulted in 352 articles of which 179 articles were relevant; “Game regulation law” resulted in 636 articles and provided 34 articles for further investigation; “Cooling Off” was used to evaluate 40 articles, collecting 5 articles for further review; “Game Regulation” provided 2469 articles and added 33 new unique articles for this research; “Game Addiction” resulted in 425 articles and added 47 new unique articles for this research. Most of the articles that included keywords “game,” “addiction,” “law,” and “regulation” did not relate to game regulation as viewed in this study, yet they were related to adult speculative games, e.g. “Sea Story” was a very big issue in 2006. In addition, “game show,” “mobile phone regulation,” and regulations that use a metaphor of Game Shutdown were excluded.

Of the 298 total news articles, as searched by Kinds, this study uses Donga (42 articles), Hankyoreh (40 articles), kyunghyang (36 articles), Hankook (57 articles), Kookmin (35 articles), Segye (40 articles), Seoul (25 articles), and Moonhwa (45 articles) plus the articles from Chosun (307 articles), Joongang (81 articles), and Blotter (74 articles). Meanwhile, ZDNet Korea by CBS Interactive provided 129 articles, Game Mecca offered 61 articles, and thisisagame.com provided 245 articles. The unit of analysis is the individual newspaper articles ($N = 1217$). Based on the theme of news articles, this study divides Korean news articles into two main subjects; articles about bill or regulation ($N=1058$) and articles about social problems ($N= 159$).

With regard to a coding process, two coders and the author took part in the study. Coders were trained until acceptable inter-coder reliability was reached. Coders were informed of the coding scheme and item classification of item with five sample articles that the author provided for the first coding training. Next, the ‘coding scheme training achievement’ of 20 randomly sampled articles from Kinds (www.kinds.or.kr) and thisisagame.com were tested. In this process, coders discussed with each other and confirmed the criterion for ‘etc.’, and ‘cited institution’. For the first coding test, coders randomly selected 100 articles from Kinds and thisisagame.com, saved them as text files, and shared them with each other. The first inter-coder reliability, which was measured by Krippendorff alpha, came out as .85; some mistakes at ‘citation’ were found. Thus, coders were retrained with a match for all 200 sampled articles. After the first inter-coder reliability was measured, coders randomly selected 50 articles from the same source respectively and measured the second inter-coder reliability. It was measured .87, and coders were retrained with the articles that did not match, especially at the ‘position of article’ and matched all 100 sample articles again. After the retraining, inter-coder reliability reached .93, and thereafter coder 1 was assigned Kinds search and Chosun coder 2 was assigned two non-daily newspapers (digital media and games related webzine) and Joongang.

To test media influence on public opinion and gamer participatory behavior, an online survey was administered to Korean adults, during a 1-week period, between October 26 and November 2, 2016. The data used in this study was based on an online panel provided by Embrain. Because the research inquiries in the current study incorporated usage of game playing (74% of Korean population played games with PC or mobile devices in 2015) and participatory behaviors as important variables, the use of an online survey was appropriate. Embrain panels consist of an online population of more than 1 million, and the panels are allocated by a ratio of

age, gender, and regions based on the resident population (census) from the Ministry of the Interior October, 2015.

The present study sample contains a total of 1,759 people. Study participants were randomly selected to receive the survey URL through an online invitation. This invitation included estimated time (30 minutes) to complete the survey and compensatory incentives. A total of 16,607 emails were sent, and 5,115 people checked the email; however, 226 were not successfully sent due to the spam settings or survey users who had recently withdrawn from Embrain. 4,963 people participated in the survey, and 2,161 people completed the survey (See Appendix 3 for the original questionnaire). Among 2,162 responses, 403 were removed due to too short response time, quitting midway, or insincere answers to the descriptive questions. The response rate was 30% as calculated using the AAPOR method version 4.0 (web).

A comparison of survey respondent demographics to census data indicates that the sample is reasonably representative of the Korean population, although education (Census, 2015) and income distribution (National Tax Service, 2016) differ. Respondents are better educated than the Korean population at large (45% hold a college degree nationally vs. 77.7% in this sample). While income ranging between KRW10,000,000 and KRW20,000,000 was sampled less than the national distribution (45.8% nationally vs. 26.3 % in this sample), income ranging between KRW20,000,000 and KRW60,000,000 was oversampled (33.4% nationally vs. 57.4% in this sample). Considering age differences between the sample in this study (age from 20 to 59) and national data (based on the adults who are 25 to 65), sampled age may partially attribute such differences. Although the sample differs slightly from the national population, it provides sufficient representation of the national population, and I do not expect that such differences will significantly alter the relationships among the variables investigated in this study.

In addition, to ensure sample validity, particularly representation of the main study subject, gamers (N = 1362), who play games currently, respondent data was compared to the Korean Game Usage Report 2016 (N = 3,045) by Korea Creative Content Agency (KCCA), affiliated with the MCST. This is the official data that is conducted by the Korean government and analyzes overall game usage; KCCA used the same online panel (Embrain) that this study used. While overall game use by age group is similar, in the case of online panelists in their 50s, the characteristics of the panelists and general population may be different regarding level of education, job, or income. Because online panelists tend to be early adopters, gamers in their 50s may be oversampled compared to older adults in the general population. Thus, KCCA conducted a combination of both online and offline (face-to-face) surveys for respondents over the age of 50 years. Concerning the sampling procedure for gamers who have played games since 2015, KCCA first used a screening question, whether a person played games or not, and stopped the survey for those who have not played the game. Then, KCCA used a quota sample, based on the ratio of gender, age, and province for game playing based on the Population and Housing Census conducted by the National Statistical Office in 2016. KCCA reported that respondents who turned out to be the gamers in their 40s were 50.8% and those in their 50s were 48.3%.

Yet, the rate of game use fluctuates (see Table 2). While the rate for those in their 20s is very similar between 2015 and 2016 data, from 2015 to 2016 KCCA data suggested that gamers in their 30s increased 9.5% while use among those in their 40s decreased 19.7% in 2016. Even when considering a sampling error, the year over year change between 2015 and 2016 was substantial.

Table 2: Game User Rate

	20s	30s	40s	50s
2015 KCCA	86.9	81.2	70.5	53.8
2016 KCCA	89.5	90.7	50.8	48.3
2017 (current)	89.1	84	73.5	64.9

From the data, it seems that those in their 50s in current study is relatively oversampled. However, when considering the growing popularity and increasingly easy access to mobile games as well as the explosion of older players, especially female players, in the social media game genre, the sample in this study of those in their 50s seems appropriate. Finally, the sample of the general population (N = 1759) vs. gamers (N = 1362) does not differ much. Compared to the general population, gamers are younger, and 3% more are male (see Table 3).

Table 3: Comparison of General Population and Gamer

	Population (N=1,759)	Gamer (N=1,362)
Age	40	38.7
Education	3.87	3.88
Income	3.24	3.22
Gender (female=2)	1.47	1.44

This study specifically focuses on the attitude and behavior of gamer population (N = 1362), who currently play games (within 12 month). In the following chapters, I will use various statistical analysis to explore a) how ideologically different media frame the issue of game regulation, b) the relationship between media and public perception, c) the questions regarding gamer's communicative ecology that involve game genre, media use, gamer co-players, and

game discussion, and community activities/learning. For each chapter, I introduce new concepts and provide a detailed explanation of how these concepts are operationalized and measured. In the appendix, descriptive statistics for variables will be provided (see Appendix 1), and specific items that the concepts measured will be offered (see Appendix 2). Finally, every chapter outlines the analytical techniques, including news content analysis or hierarchical regression, that were conducted for the study. Interpretation and implication of the results of each chapter will be addressed.

CHAPTER 2. GAME REGULATION AND MEDIA DISCOURSE

In this chapter, I examine ideologically diverse media sources and what role media play in game regulation and potentially influencing public perception of games, based on media frames and news sources. First, as theoretical guidance of framing and public opinion on game issues, I present the differences between the case of the Columbine shootings in the US (1999) and the game regulation controversy in Korea to better understand the role of elites and media on public opinion. Assuming that social reality surrounding game regulatory issues is influenced by an interplay between political elites and media organizations, this study examines relationships among elites, media, and public under the media effect mechanism and how media discourse developed over time as an in-depth introduction of sociopolitical contexts of game regulation issues in Korea.

To explain media discourse or media practices in Korea on game regulatory issues and the relationships among elites, media, and public, I suggest four mechanisms that share important roles in news media and its impacts on society. Among the four mechanisms, this study particularly highlights the strong influence of elites on news making and the coalition between elites and news organization. This is particularly relevant to this study as the Korean government implemented the Game Shutdown Law in 2011 without holding public hearings or public debates, and media reporting on the issue focused almost exclusively on the perspective of elites. Yet, the possibility of a public driven model where the public influences news media and potentially affects policy direction will also be addressed through the exploration of events surrounding the Game Addiction Law (2013).

To analyze media discourse on game issues, I assess the overall position of ideologically different media, the logics or frames that support or oppose such positions, and information

sources (government elite vs. civil level) that support positions and frames. Along with reporting on game regulation, I explore the sensational reporting on game issues that emphasize the idea of games as causative of violence and/or addiction. Analysis includes the media's view of effects of game playing and attribution of social problems in order to explore a) the journalistic practice of reporting on game regulatory issues and social problems attributed to gaming and b) the potential linkage between the media presentation and public perception of game playing and game violence/addiction (in Chapter 3); It is likely that slanted reporting on gaming and gamers may have negatively skewed public perception on the issue of game regulation.

In reporting on game issues, the media has become the battlefield for a proxy war between two conflicting groups; as such, the coverage of the game regulatory issue has become both politicized and contentious. This is because media outlets compete with each other to represent positions regarding regulation and the attribution of social problems to gaming. Moreover, I argue that the influence of real-world politics on the ideological tendencies of news media on game issues tends to politicize game issues even further. This is because regulation has inherent political implications, and more specifically that conservative politics tends to attempt to justify regulation through the idea of child protection or the social cost of addiction or violence attributed (by them) to gaming. Conversely, the progressive perspective on this issue highlights individual freedom and the ineffectiveness of regulation. Moreover, in the Korean context, it is plausible that conservative media that support dominant political groups tend to reflect elites' perspective (regulating games), yet liberal media are more likely to present the voices of individuals or civil society.

To analyze the frames of ideologically different media, I examine recurring ideas or reasons for or against game regulation (as issue-specific media frames that apply to the topic of

game controversy); as media frames that involve interaction between elites and media organizations, I adopt Gamson and Modigliani's (1987) view that it is necessary to have "a central organizing idea for making sense of relevant events and suggesting what is at issue" (p. 57). Specifically, I narrow down frames as repetitive ideas and themes (Huang, 1995), and as a public frame I apply Entman's (1993) notion of individual frames as schemas for interpreting events or issues based on selection. Moreover, since news media tend to use more than one frame in reporting on the game regulatory issue, rendering it impossible to fully capture the complex frame works simply by focusing on the overarching frame, I analyze the sum of frames (*diversity of logic*) and combination of frames (*the way media make an argument*). I also adapt the concept of sum of frames into sources to analyze the *diversity of voices* of news media.

Overall, regarding framing, I offer the following research inquiries: Do political elites have a strong influence on the media and public, especially in the case of the Game Shutdown Bill? If not, can public driven or social actors stand in the role assumed by the institutional processes of news making, as might be the case in the postponement of the Game Addiction Bill? In other words, it might be possible that social actors' policy preferences influence media orientations. If so, how likely are public-driven frames to affect policy direction under a strong institutional environment? Can independent civic actors influence the media discourse on contentious political issues, or do political elites from the opposing institution influence the direction of the game regulation? Is this a mechanism of competition or coalition among the political elites, media, and public in the dynamics of game regulation?

Literatures on game issue and constructing frames

Previous studies on school shooting incidents (Muschert, 2009; Chyi & McCombs, 2004;

Birkland & Lawrence, 2009) provide theoretical guidance on framing and public opinion. Yet, such cases are somewhat different from the current study regarding the issue development process (constructing frames) and the relationship between elites and media. Thus, what distinguishes this study from previous ones, is the relatively strong institutional influences on news making. In the Columbine shootings, journalists were thrown into a situation where they had to develop new frame of coverage (Lawrence, 2001); the lack of precedent necessarily meant that a corresponding frame was nonexistent. When the incident occurred, the frames of journalists reconstructed the incident, which influenced the general public or policymakers on the issue of gun control (shooting incident → media reporting → public opinion or policymaker). The conflict between pro vs. con on gun control emerges secondary to the incident, and the media's main concern was explaining why such an event had occurred (Birkland & Lawrence, 2009).

Though the incident was shocking enough to garner national attention (Muschert, 2009), research showed that media frames merely reinforced preexisting attitudes (Haider-Markel & Joslyn, 2001). Since the influence of Columbine on policy change or public opinion on gun control is provisional or minimal, Birkland and Lawrence (2009) stated, “the influence of Columbine may have been more significant in the scholarly realm than in the real world” (p. 1410). In addition, with regards to perceiving games as responsible for the school shooting, as the case of the *Brown v. Entertainment Merchants Ass’n* (2011) showed, US society valued freedom of speech over regulating games due to the (hypothetically) violent aspects of game playing. The media, Supreme Court, and academia do not fully agree on the causal effects of game playing on violence under the logic that violent game playing causes an increase in aggression. Thus, the attribution of games as a driver of social problems (in this case, school

shootings) is a contested belief in the US. On the other hand, game regulation policy in Korea assumes the above causality and expands its effects on addiction under the logic that (online) game playing causes increases in violence and addiction and these violent/addictive features of game playing lead to school and social problems. Consequently, games are now viewed as one of the four major addictions in Korea (drugs, alcohol, gambling, and games).

Since the gaming controversy in Korea was instigated by government proposition of a regulatory bill (as opposed to the Columbine case), opposing groups then formed to either support or oppose the regulation, the flow of the media coverage shows, from policy or policymaker to media to the public. The elites construct the frames and then the media report on the issue based on elites' perspective. Thus, the media focuses more on the definition of what the policy is and who supports or opposes the bill, paying less attention to why an event occurred, because it is very clear that regulator already hold the notion that game playing causes problems (*why*). Thus, the media's main reporting is on the political positions of groups towards the already proposed bill and the conflicts among associations/groups, and the coverage of game controversy issue becomes political or contentious. Information source emerges as an important factor in these relationships.

Models of news making and its influence on the public

The first model is based on the notion of strong elite influences over news making (Bennett, 1990; Zaller, 1992; Zaller & Chiu, 1996) or issue framing in news coverage (Entman, 2004), based on the flow of media coverage from policy or policymaker to the media and to the public. Second is the coalition building between elites' importance setting and media's interest seeking (Cook, 1989; Cook, 1998), based on the practice of news making on game issues using

elites' frames: While elites tried to regulate games under the frames of violence and addiction and gather support for regulation, media reporting was based on publicity seeking via sensationalizing a controversial issue. Sensational reporting includes the media reporting that excessive game playing (*addiction*) causes social problems (*violence*). Third is a demand model (Uscinski, 2014) that news firms show preference to a particular ideology in an attempt to gratify their audience. Fourth is the model of public-driven frames that impacts policy change. As opposed to the negative frames and harmful effects of games, groups of opposition constructed alternative frames, and the media respond to them, potentially influencing the suspension of the Game Addiction Bill (2014).

The assumption of a strong media effects model on game issues is that the public is influenced by media frames such that the public perception of games and gamers is shaped by media consumption. Because coverage of the issue is sensationalized with stories such as parents who were so distracted by game playing that they neglected their children to death, the public may perceive games, game play, and gamers negatively. Furthermore, since the strong media effects model on game issues implies opinions of political elites towards games and their reasoning for regulation, it is important to analyze the media's representation of game regulatory issues, what logic ideologically different outlets pose for presenting their position, and what sources of information or opinion each media cites.

Scholars who regard media as a part of the political governing process (Bennett, 1990; Cook, 1989; Cook, 1998) or having an institutional role in society (Boydston, 2013) emphasize the strong role of elites in the news production process (dynamic of news production, including journalistic norms/practices and elites forces). Bennett's indexing model presents a conception of a top-down/upside-down government control that official elites, most prominently the President,

dominate most news content and media mirror the ideological and policy perspectives expressed by actors in institutional politics (Bennett, 1990).

Specifically, Bennett (1990) argues that 1) domination of government sources for reporting excludes alternative voices (as routine professional decisions) and 2) journalists merely rely on government-official accounts of events (transactional or symbiotic relations between journalists and officials). Consequently, the agenda of government officials, rather than that of journalists, directs the flow of information, thereby limiting the alternatives presented to the public (Bennett, 1990). Yet, the major claim is that, in a representative republic such as the US, the press is acting in a democratically responsible way by favoring public officials as the latter are elected to represent the will of the people. Bennett (1990) further argued, “Governmental definitions of reality are supposed to be the best approximation of political reality and responsible public opinion” (p. 109).

The role of journalists in the model of indexing (Bennett, 1990) is parallel to Fishman’s (1980) notion of journalists’ routine-social location of reporters (beats or their standard operating procedures), according to which journalists rely on public bureaucracies as (self-validating) news sources. Fishman (1980) argued that not only access to public officials, but also their interpretive schema (phase structures) becomes bureaucratic in origin and, consequently, routine news practices end up “legitimizing institutions of social control by disseminating to the public institutional rationales as facts of the world” (p. 138). Both Bennett’s (1990) and Fishman’s (1980) models suggest that social or political reality is shaped through the interplay between national elites and national media organizations from the socially structured/mediated elite perspectives. As indicated, professional norms of journalism (Fishman, 1980) make journalists

deeply vulnerable to manipulation by claims-makers and affect perception of their role and audiences (Stocking & Holstein, 2009).

Cook (1989; 1998) argued that the news is an outcome of interaction between journalists and other political actors, namely the compromise between press's interest seeking and state's importance setting. This reflect his views on news media; Cook (2001) regards news media as loose systems framed through cooperation and compromises between political parties that represent various interest groups and organizations. In this respect, making news is a coalition building between officials' efforts to shape policy and media's publicity seeking, or news making. Although the notions of indexing (Bennett, 1990; Zaller & Chiu, 1996) and news institutionalism (Cook, 1989; Cook, 1998) share important roles for public officials, Cook (1989) insisted that media serves more as devil's advocates against elite forces rather than a mouthpiece that parrots official voices. In this context, journalists serve to control what is presented to the public as the news by drawing upon "journalistic definitions of news values" (Cook, 2006, p.162).

While political and institutional conditions (*politics*) influence political behavior of the media's reporting (*media*), media also affect public choices or perception (*public opinion*). According to Jacobs and Shapiro (2000), "Politics, media coverage, and public opinion are interconnected" (p. 65). This view reflects media's mediating roles between government elites and the public (Bennett & Entman, 2001). Elites impact news making process and outcomes, and the contents of news influence public opinion by providing classification schemes or categorizations that are "central to political maneuvering and persuasion" (Edelman, 1993, p. 232). At the same time, news content can be viewed as "simplified, coordinated, and advocated menu" provided by political or organizational elites (Sniderman & Bullock, 2004, p. 338). News

content serves as a maneuvering strategy of *crafted talk* to change public opinion that officials regard as an object of manipulation (Jacobs & Shapiro, 2000). Accordingly, the preferences and choices of citizens would be highly dependent on the mediated influences of political institutions.

Yet, Uscinski (2014) contends that supply-side models (institutionalism) fail to explain the content of news due to the disconnection from market realities, claiming that “economic elites, government officials, and news-people can exhibit only so much control over news content before audiences turn away” (p. 32). While Uscinski (2014) examined both demand- and supply-side models involving media ideological biases/slants (Druckman & Parkin, 2005; Groseclose & Milyo, 2005), as opposed to strong elite forces, he emphasizes a demand-side model (economic incentive mediation model) that news firms, in an effort to secure sufficient readership or viewership to command advertising dollars, follow the audience’s ideological and partisan preferences. As a consequence of this profit-seeking practice, audiences become gratified yet uninformed consumers instead of civic-minded participants in democracy.

While Gruszczynski and Michaels (2012) suggest that elites that have failed to achieve their policy goals continue to advocate for the favored outcomes by altering framing of the event, as opposed to the top-down model, there are cases in which public framing may have an effect on policy change. Based on the notion of collective attention shift, Baumgartner and his colleagues (2008) found that “events, organizational efforts, governmental actions, and media framing,” widely opened the death penalty debate (functioning as a positive feedback mechanism of frame-shifting), presented “a new dimension of innocence and redefined the policy issue” (p. 82). According to these authors, all the events are “reciprocally have influenced one another,

each reinforcing the trend toward greater attention to questions of innocence” (Baumgartner, et al., 2008, p. 171).

Both supply and demand models encompass negative consequence to the public. However, the institutional approach and demand-side models share similar assumptions that portray the public as a passive-seeker (or target of media effects) and elites as strong media impact-providers. Strong elites’ role in media effects establish the notion that journalists’ routines and practices constitute an early stage in media agenda building as well as framing strategy, consequently, suggesting a similar media effect model on public. Because elite sources of news are the origin of the media agenda and framing strategy, these sources are socially structured so that those who report on issues of policy ultimately transmit the opinions of elites to the public at the expense of other voices within society, regardless of whether the report is supportive or critical.

Research Questions

The complex dynamics of Korean game regulation seemingly encompass both cases for top-down and bottom-up media frames. Concerning the Game Shutdown Law (2011), it might be said that strong institutional frames won over the oppositional groups. However, the Game Addiction Bill (2013) failed to be passed. Thus, analysis of frames of the news content is needed to identify how the ideologically different media framed game regulation in the period of 2004-2015 (2004: Game shutdown bill proposed; 2011: Game shutdown law implemented; 2013: Game addiction bill proposed and still pending) have evolved. Since this study focuses on the two bills in different periods and changes of position, frame, and source/citation, it is important to examine difference between various media and difference within media over the periods.

Based on differing results of bill proposals, this study raises the following research questions:

RQ1: How much attention do media pay to game regulation issues? And what is the overall tone/position (support/oppose/neutral) of media on the issue?

RQ2: What frames of reference do the media present on game regulation issues? Does frame of reference differ among various media outlets?

RQ3: Over the periods, is there any difference between and within media on frame?

RQ4: Which information sources (referred personals or institutions) do the media cite and how much is allocated? Is media's ideological propensity related to allocation of information source?

RQ5: Over the periods, is there any difference between and within newspapers on sources?

RQ6: How do the ideologically differing media report game-related social problems? And, whom do the media blame?

Conceptual and operational definitions of variables

This study divides the main theme of articles into *bill/regulation* and *social problem*. The bill/regulation article focuses on regulatory issues, such as game regulation bills (Game Shutdown, Game addiction law, Cooling-off), the influences of the regulation, and the reasons why or why not games should be regulated. The social problem article focuses on social issues that arguably excessive game playing causes domestic problems, school problems, or crime. The two themes are treated as mutually exclusive and, if a social problem article mentions game regulation, such article is coded as bill/regulation (Table 4).

Table 4: News Articles

Bill/Regulation	Social Problems
Game regulation bill	Game playing causes:
Influences of the regulation	Violence
Reasons of why regulate or not regulate games	Addiction
	Social problems

The bill/regulation articles are divided into two positions, support or oppose the regulation (Table 5). Position of regulation support is divided into three frames: a) Child protection includes the logic that teenagers are the target of governmental protection, and the government should guarantee a teenager's right to sleep, which also provides a rational for governmental intervention on preventing or protecting teenagers from violence and addiction due to gaming; b) Social order includes the logics that the government ought to provide education for game regulation/violence, establish a center for preventing game regulation, and prevent social problems that are caused by problematic/addictive game playing; and c) Social cost includes the logics that public interest or common good is more important than the private interest or freedom of game companies, namely the enormous cost of prevention or treatment.

Opposition to the regulation is divided into four frames: a) Personal freedom, which includes the logic that adolescent gamers' right to privacy and pursuit of happiness/leisure encompasses the right to play games; b) Right to educate one's own children, which means that parental supervision, not government intervention, is necessary, and mutual consent between parents and their children on game playing is more important than forced regulation; c) Cultural contents, which includes the idea that games have cultural aspects and should be protected by freedom of expression since games are a cultural/artistic genre, cultural/Han-wave's digital contents, E-sport contents, and game industry should not be intervened by the government, since

workers have freedom of job selection, and sale or export drop due to the regulation, foreign companies have dominated in domestic game industry; d) Skepticism on the effectiveness of regulation in that teenagers can easily circumvent the regulation and the access rate for online games as well as the number of problematic gamers has not decreased since the Game Shutdown Law.

Table 5: Frames of News

Position	Frames	Contents
Support	Child protection	Protect teenagers' right to sleep
	*Social order	Provide education & treatment centers
	*Social cost	Social cost of game addiction
Oppose	**Personal freedom	Pursuit of happiness/leisure
	**Right to educate own children	Parental rights, parental supervision
	Cultural contents	Games are cultural/artistic genre
	Effectiveness	Question on effectiveness of regulation

*Frame of social cost and social order is combined into "Social order"

**Frame of right to educate own child and individual freedom is combined into "Freedom"

Each frame is coded by either zero, meaning "not present" or 1, meaning "present at least once." Due to the small number and similarity in concepts among some frames, this study conducts a factor analysis (principle component analysis) among frames.

As a result, the frame of social cost (N = 71) and social order (N = 558) is combined into the frame of "social order" (N = 568), and the frame of right to educate own child (N = 142) and individual freedom (N = 228) is combined into the frame of "freedom" (N = 286) (The result from Varimax rotation component shows group 1: social order (.765) and social cost (.736) and group 2: individual freedom (.801) and right to educate own children (.824). Consequently, five

frames are used in the analysis. For frames that support regulation, “child protection” ($M = .58$, $S.D. = .49$) and “social order” ($M = .56$, $S.D. = .50$) are used, and for frames that oppose regulation, “freedom” ($M = .28$, $S.D. = .45$), “cultural contents” ($M = .54$, $S.D. = .50$), and “effectiveness” ($M = .26$, $S.D. = .44$) are considered.

Table 6: Analysis of Seven Frames

Rotated Component Matrix of Factor Analysis

	Factor 1	Factor 2	Factor 3
Youth Protection	-.063	.651	-.121
Social Order	-.041	.225	.759
Social Cost	.062	-.176	.745
Personal Freedom	.799	.044	.163
Right to educate own children	.825	.058	-.136
Cultural contents	-.082	-.473	-.065
Effectiveness	.067	.689	.061

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 4 iterations).

Regarding articles about game bills or regulation, in the existing research, Yu and his colleges (2011) analyze the news frames of game regulation by separating *emphasis on negative aspects* from *emphasis on conflict*. However, these two concepts are ambiguous and interrelated. Thus, instead of separating the aspects of negativity and conflict, the current study narrowly focuses on the conflicting aspect that undisputedly connotes a positive view on regulation vs. opposition that undisputedly connotes a negative view on regulation based on the theory of emphasis frame. To identify frames, the deductive approach (De Vreese, 2005; 2012) was used, and frames are operationalized based on repetitive ideas and themes (Huang, 1995). After randomly selecting 100 articles, the commonly used reasons (ideas) on conflicts (theme) of two

opposing sides (3 pros vs. 4 cons) are analyzed and then matched with the Judges' stance in the Court decision for the Constitutional Petition of the Game Shutdown Law (2014). Finally, seven generic frames for game regulation controversy were constructed to examine the relationship among salient reasons/logics, position/valence, and information sources.

All the referred institutions and people are recorded in the coding process. The total number of institutions and people is over a 1000. After excluding duplicated sources, a total of 948 sources is produced, based on institutions where people are affiliated/related. First, sources are reduced to 16 categories: ruling party politicians, opposition party politicians, Ministry of Gender Equality and Family (MGEF), Ministry of Culture, Sports and Tourism (MCST), Ministry of Education (MOE), Ministry of Government Administration and Home Affairs (MGAD), Ministry of Health and Welfare, Ministry of Science, ICT and Future Planning, other governmental institutions, academia (university level), hospital (including medical universities), interest groups (that are directly related to profit of game industry), school/teacher (lower than university), NGOs, media, and others. Game companies and game associations are combined as interest groups and other governmental institutions includes government-affiliated organizations, and academia includes academic societies, universities, and research institutes. Since law firms and lawyers are connected with NGOs for Constitutional petition against the Game Shutdown Law, they are placed in the NGO category. Those that are not categorized in any of the above criteria, such as the stock market or media are categorized as others. Secondly, these 16 sources are further condensed into six categories: politicians, government, interest groups, civil society, academia-medical, and others. The ruling party politicians and opposition party politicians are combined into politicians. Ministries and other governmental institutions are merged into

government; academia and hospital are combined into academia, interest groups remains its own category (Table 7).

Table 7: Source of News	
Politicians	Ruling party politicians Opposition party politicians
Government	Ministry of Gender Equality and Family (MGEF) Ministry of Culture, Sports and Tourism (MCST) Ministry of Education (MOE) Ministry of Government Administration and Home Affairs Ministry of Health and Welfare Ministry of Science, ICT and Future Planning Other governmental institutions
Interest groups	Interest groups (game companies and game associations)
Academia	Academia (university level) Hospital (including medical universities)
Civic Society	Grade schools/Grade school teachers NGOs
Others	Others (Stock market, News firm)

News articles not related to game bills or regulation but related to social problems, conflicts, or crimes are divided into negative and positive/neutral based on the perspective of game or effect produced by game playing. The articles with a negative perspective include school violence, household conflicts (family dynamics, such as relations between parents and children or between spouses), cybercrimes (game-items transaction fraud, offline PvP [player versus player] fighting) and real-life crimes. This position assumes that these social problems are

caused by excessive or addictive game playing. The articles with a positive/neutral perspective include news that does not mention social problems but instead focuses on positive aspects of game playing. Moreover, the present analysis contains six articles with the positive/neutral position, with contents related to teenage gamers' cyber terror on the website of the Ministry of Gender Equality & Family after the Game Shutdown Law came into effect. While positive/neutral articles use the term *game addiction*, the reporters do not express negative views of gaming but instead report the facts of the incident. Since the social problems mentioned above are caused (arguably) directly or indirectly (attribution) by game-playing activities, three causes for such a responsibility are analyzed, including game/game company, individual, and government/social environment that are mutually exclusive.

In regard to attribution of social problems (see Table 8), each attribution is coded as zero, meaning "not present" or 1, meaning "present at least once." The articles that blame games or game companies for gamers' negative symptoms (withdrawal, isolation in the online world). Such articles specify game titles usually mentioned in the context of criminals preferring them and describe violent contents/addictive features as aspects of games intentionally included by game companies in order to increase sales. In addition, these articles tend to comment that game companies have failed to make social contributions such as the lack of a fund for prevention of game addiction. In terms of gamers' individual responsibility, the articles argue that gamers are responsible for their own game addiction and social problems, asking gamers' family members to bear responsibility for the problems caused. Parents should be held responsible for controlling (or not controlling) children's excessive game playing, and such articles claim that lack of communication between parents and teenage gamers or parental indifference are leading reasons for teenagers' game addiction and social problems. Most of the Op-Ed pages created by directors

or doctors of game-addiction preventive institutes self-servingly suggest that parents should bring their children, who are addicted to games, to the institution.

In the attribution for the government and (systematic) social environment, the article indicates that a competitive school environment or lack of entertainment infrastructure for youth promotes adolescent immersion into gaming. Moreover, high dissemination of smart technology (e.g. smart phones or high-speed internet) and its easy accessibility allows even adults to potentially become addicted to games. Moreover, the articles point out the absence of governmental policy or regulation on the identity fraud or game item fraud that is committed by those who steal personal information such as social security numbers (SSN), claiming that the government's lack of preventive policy or corresponding law aggravates game-related crimes.

Table 8: Attribution of Social Problems

Games or game companies	Gamers' addictive symptoms cause problems Game companies' lack of social contribution
Individual	Gamers and parents are responsible for addiction
Government & Social environment	Competitive school environment Lack of entertainment infrastructure Smart technology and its easy accessibility Government's lack of preventive policy

Results

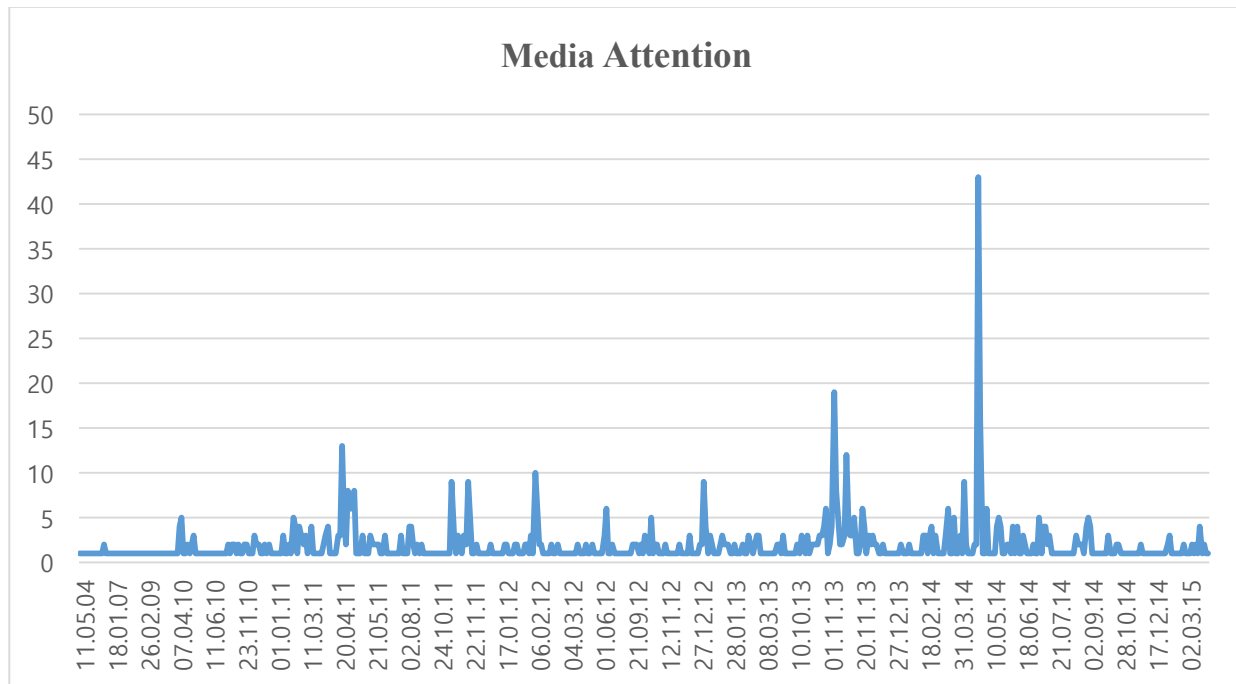


Figure 1: Media's Overall Attention

From 2004, when the Game Shutdown Bill was proposed, to 2009, only 45 articles were reported (Figure 1). Compared to the second period, the media did not pay much attention to the issue of game regulation until the bill was actually brought before the National Assembly, when the media reported on the issue more than 10 times. Thus, this study mainly focuses on the second and third period when such bills caused heated debates and garnered more media attention. From the 1058 articles, the current study set of 1013 articles from 2009 to 2015 become the focus of our analysis (Table 9).

Classification of media

Table 9: News Media Frequency

	Cho- Sun	Jung- Ang	Donga	Mun- wha	Kook- min	Seoul	Han- kook	Segye	Kyung- hyang	Hank yoreh	Thisis game	Game mecca	Bloter	Zdnet	Total
04~09	12	11	2	1	3	2	1	4	2	2	3	1	0	0	44
10~12	103	29	31	26	14	21	17	13	18	39	70	24	34	24	463
13~15	147	24	6	14	4	0	7	1	7	9	160	33	36	102	550
N*	250	53	37	40	18	21	48	14	25	24	230	57	70	126	1013
Mean	1.78	2.05	2.48	2.47	2.66	2.71	3.27	3.35	2.84	2.75	2.28	2.26	2.21	1.91	2.21
S.D.	.88	.92	1.12	1.08	1.02	1.14	.98	.84	1.06	1.18	1.1	.95	1.04	.96	1.07

* Number of articles from 2010 to 2015

Most of the previous studies have classified Korean newspapers based on ideological differences: Chosun, Joongang and Donga Daily are the conservative newspapers, with Kyunghyang and Hankyoreh as the liberal newspapers and Moonwha, Kookmin, Seoul and Hankook Daily as the moderate ones.

If the media are divided by ideological differences, the majority of conservative newspapers (mainly Chosun and Joongang daily) reports the oppositional position, while moderate and liberal newspapers take a balanced stance, and the game and online magazines also take an oppositional stance. As the newspapers' overall position shows a U-shape from Chosun to ZDnet, the distribution of the position is similar to the previous classification of newspapers on ideological difference (see Figure 2).

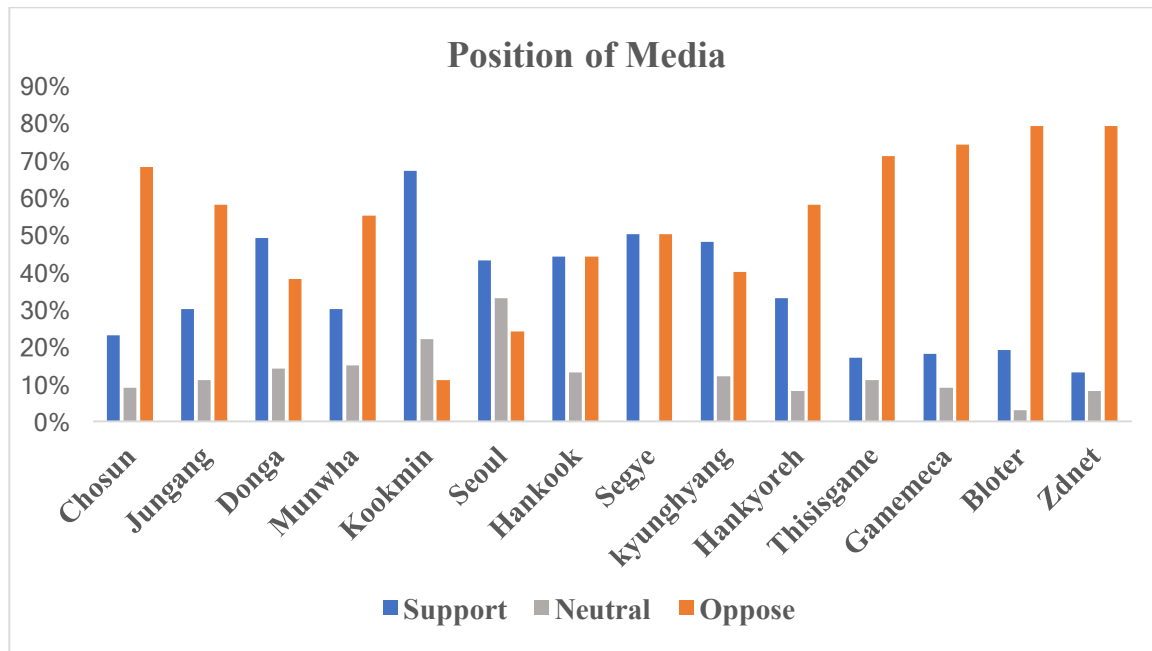


Figure 2: Media's Overall Position

Since the total amount of liberal and moderate newspapers was small compared to other groups, and overall position and usage of frames was similar to each other, the two groups sort into a single “moderate” category.

Table 10: Classified News Media Frequency

	Conservative	Moderate	Webzine	Total
2nd Period (10~12)	163	148	152	463
3rd Period (13~15)	177	43	330	550
Total	340	191	482	1013

Based on previous studies and the overall position of the media, the current study divided news media into three ideologically distinct groups: conservative, liberal/moderate (named as

moderate), and webzine. Newspapers were grouped using previous criteria, and Blotter, ZDNet Korea, Game Mecca and thisisagame.com were categorized as webzine.

Media attention, overall tone/position of game regulation issues

Overall, the media paid close attention to three major events (Figure 1): first, when the Game Shutdown Law was passed (April, 2011); second, when the Game Addiction bill was proposed (December, 2013); and third, when the Court reached a verdict on the Constitutional petition on the Game Shutdown Law (April, 2014). A few articles reported the regulatory issue in the first period (2004 to 2009), but the media did not give much attention to the introduction of game regulation (Table 10). In the second period (N = 463), when the regulation was actually implemented, the media reported on three issues, which included the passage of and the practice of the Game Shutdown Law as well as the proposal of the Cooling Off bill (February, 2012). In the third period (N = 550), the media focused on two issues, namely a proposal of the Game Addiction bill and the result of the Constitutional petition. The result of media attention suggested that the Game Addiction bill received more attention than the Game Shutdown Law, even though the former is a pending proposal. This may be because the social impact of the Game Addiction bill, which included games as one of the four major addictions, and the crafted frame that the games are a social evil was more powerful than the discourse of the Game Shutdown Law.

Along with the Game Addiction bill, the articles of the Constitutional petition on the Game Shutdown Law, raised by NGOs and the game industry, grew substantially. Moderate media paid more attention to the Game Shutdown bill (2nd period, N = 148) than the Game Addiction bill (3rd period, N = 43), and the number of related articles in the second period more

than doubled (Table 9-2). However, webzines paid more attention to the Game Addiction bill (3rd period), the number of articles in the third period (N = 330) was more than double in the second period (N = 152). Conservative newspapers covered the bills in the 2nd and 3rd period in a relatively similar way, yet they paid a little more attention in the 3rd period.

Table 11: Position of the Media on Game regulation

	Cho- sun	Jung- ang	Donga	Mun- wha	Kook- min	Seoul	Han- kook	Segye	Kyung- hyang	Hank Yoreh	Thisis game	Game mecca	Bloter	Zdnet	Total
Sup	57 (23)	16 (30)	18 (49)	12 (30)	12 (67)	9 (43)	21 (944)	7 (50)	12 (48)	8 (33)	40 (17)	10 (18)	13 (19)	16 (13)	251 (25)
Neu	22 (9)	6 (11)	5 (14)	6 (15)	4 (22)	7 (33)	6 (13)	0 (0)	3 (12)	2 (8)	26 (11)	5 (9)	2 (3)	10 (8)	104 (10)
Opp	171 (68)	31 (58)	14 (38)	22 (55)	2 (11)	5 (24)	21 (44)	7 (50)	10 (40)	14 (58)	164 (71)	42 (74)	55 (79)	100 (79)	658 (65)
Total	250 (100)	53 (100)	37 (100)	40 (100)	18 (100)	21 (100)	48 (100)	14 (100)	25 (100)	24 (100)	230 (100)	57 (100)	70 (100)	126 (100)	1013 (100)

* () Percent within Media

Overall, the Korean media holds a negative view (65) on game regulation (Table 11). In detail, conservative media takes an oppositional view (63.5) on regulation more than twice as often as the support view (26.8) (Table 10-2). In a similar way, the articles in webzines opposing regulation (74.9) far outnumber those that support it (16.2). However, moderate media stands relatively balanced in its views on game regulation. Moderate media report articles that oppose regulation (42.4) and support regulation (42.9) at basically even rates. Moderate media also report the articles that stand in a neutral position (14.7) more than other media.

Table 12: Overall position (classified media) on game regulation

	Conservative	Moderate	Webzine	Total
Support	91 (26.8)	82 (42.9)	78 (16.2)	251 (24.8)
Neutral	33 (9.7)	28 (14.7)	43 (8.9)	104 (10.3)
Oppose	216 (63.5)	81 (42.4)	361 (74.9)	658 (65.0)
Total	340 (100)	191 (100)	482 (100)	1013 (100)

*() Percent within media

Table 13: Positions in the 2nd the 3rd periods

Position on the 2nd Period					Position on the 3rd period				
	Con	Mod	Web	Total		Cons	Mod	Web	Total
Support	50 (30.7)	69 (46.6)	23 (15.1)	142 (30.7)	Support	41 (23.2)	13 (30.2)	55 (16.7)	109 (19.8)
Neutral	17 (10.4)	21 (14.2)	13 (8.6)	51 (11)	Neutral	16 (9)	7 (16.3)	30 (9.1)	53 (9.6)
Oppose	96 (58.9)	58 (39.2)	116 (76.3)	270 (58.3)	Oppose	120 (67.8)	23 (53.5)	245 (74.2)	388 (70.5)
Total	163 (100)	148 (100)	152 (100)	463 (100)	Total	177 (100)	43 (100)	330 (100)	550 (100)

*() Percent within media

*() Percent within media

Both conservative media and moderate media reported oppositional articles more in the third period (Table 13). In the third period, moderate media reported oppositional articles 14.3 more and conservative media reported oppositional articles 8.9 more than in the second period.

However, the general tone/position of the media do not fully capture that of the political position or organizational view of the newspapers. There were many oppositional reports in the factual articles (especially as a result of the Constitutional petition on the Shutdown bills). In addition, journalists used particular frames or logics of support for opposition to the regulation when reporting on issues such as regulatory bills as well as statements from open forums, interest groups, and the government. Therefore, this study additionally analyzes news media's position or tone by suggesting a frame centered approach as well as the position.

Media frames on game regulation issues

Table 14: Overall Frames

	N	Min	Max	Mean	S.D.
Child Protection	608	0	1	.57	.5
Social Order	583	0	1	.55	.5
Freedom	292	0	1	.28	.45
Cultural contents	567	0	1	.54	.5
Effectiveness	266	0	1	.25	.43

Among the five frames, child protection ($M = .57$, $S.D. = .50$) was the most frequently used (Table 14). For each media group, conservative media used child protection ($M = .72$, $S.D. = .45$) and cultural contents ($M = .53$, $S.D. = .50$) frames most often, moderate media used social order ($M = .85$, $S.D. = .35$) and child protection ($M = .81$, $S.D. = .40$) most often, and webzine used social order ($M = .66$, $S.D. = .47$) and cultural contents ($M = .51$, $S.D. = .50$) most often. Overall, both child protection and social order were used in a similar rate in the frames that

support the regulation. However, among the frames that oppose the regulation, the cultural contents frame was used approximately twice as much as other frames.

The number of frames that oppose regulation (N = 1125) and the number of frames that support regulation (N = 1191) were very similar. However, with regard to the position of media, the amount of the frames that oppose the regulation should be much more than the frames that support the regulation. It means media did not use a single frame, and the dynamics of news reporting was more complex than mere support vs. opposition. Thus, it is necessary to analyze how each media uses frames and the combination of such frames in order to deeply examine the practice of news reporting on game regulation.

Table 15: News Media and Frame Sum

	Cho- sun	Jung- ang	Donga	Mun- Wha	Kook- min	Seoul	Han- kook	Segye	Kyung- hyang	Hank yoreh	Thisis game	Game mecca	Bloter	Zdnet	Total
Mean	1.78	2.05	2.48	2.47	2.66	2.71	3.27	3.35	2.84	2.75	2.28	2.26	2.21	1.91	2.21
S.D.	.88	.92	1.12	1.08	1.02	1.14	.98	.84	1.06	1.18	1.1	.95	1.04	.96	1.07
N*	250	53	37	40	18	21	48	14	25	24	230	57	70	126	1013

* Number of article from 2010 to 2015

In order to elucidate the differences and combination of frames used by various media outlets, two set of analyses were conducted: a) differences in the sum of frames that each article uses and b) correlation among the five frames. In reporting on game regulation, 71.3% of news articles (Table 15) used more than one frame, with an average number of 2.21 (Table 16). As the *frame sum* demonstrates, conservative media (M = 1.90, S.D. = .94) used fewer frames than moderate media (M = 2.86, S.D. = 1.08) or webzines (M = 2.17, S.D. = 1.05).

Table 16: Frame Sum frequency

Sum	Frequency	Percent
0	14	1.4
1	277	27.3
2	358	35.3
3	231	22.8
4	108	10.7
5	25	2.5
Total	1013	100

Table 17: Frame Sum by period

Total				2nd period				3rd period			
	N	Mean	S.D.		N	Mean	S.D.		N	Mean	S.D.
Con	340	1.91	.94	Con	163	1.88	.97	Con	177	1.93	.92
Mod	191	2.86	1.09	Mod	148	2.95	1.08	Mod	43	2.58	1.07
Web	482	2.17	1.05	Web	152	2.42	1.06	Web	330	2.06	1.04
Total	1013	2.21	1.08	Total	463	2.4	1.12	Total	550	2.06	1.01

The combination of frames is shown in the table of correlation among frames (Table 18). For conservative media (Table 19), the frame of child protection and social order are positively related ($r = .144$), child protection and freedom are negatively related ($r = -.108$), and cultural contents and freedom are negatively related ($r = -.190$). For moderate media (Table 20), the frame of child protection and effectiveness is positively related ($r = .349$) and effectiveness and freedom is positively related ($r = .164$). For webzines (Table 21), the frame of child protection and freedom is positively related ($r = .174$), yet effectiveness and cultural contents is negatively

related ($r = -.152$). As the combination of frames was shown, conservative media used two frames together (child protection and cultural contents). Together with the frames of child protection and cultural contents, moderate media additionally used the frame of social order.

Table 18: Correlation among Frames

	Child protection	Social order	Freedom	Cultural contents	Effectiveness
Child protect	1				
Social order	-.001832	1			
Freedom	-.012785	.0470016	1		
Cultural contents	-.045928	-.079*	-.05726	1	
Effective	.134**	.089**	.089**	-.075*	1

**. Correlation is significant at the .01 level (2-tailed).

*. Correlation is significant at the .05 level (2-tailed).

Table 19: Conservative Media correlation among frames

	Child protection	Social order	Freedom	Cultural contents	Effectiveness
Child protect	1				
Social order	.144**	1			
Freedom	-.108*	.0419961	1		
Cultural contents	-.068975	-.095258	-.190**	1	
Effectiveness	.0086551	.107*	.132*	-.095853	1

**. Correlation is significant at the .01 level (2-tailed).

*. Correlation is significant at the .05 level (2-tailed).

Table 20: Moderate Media correlation among frames

	Child protection	Social order	Freedom	Cultural contents	Effectiveness
Child protect	1				
Social order	.1339327	1			
Freedom	.005616	-.096479	1		
Cultural contents	-0.0686	.0304697	.0686003	1	
Effectiveness	.349**	.0690416	.164*	.0270056	1

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

Table 21: Webzine correlation among frames

	Child protection	Social order	Freedom	Cultural contents	Effectiveness
Child protect	1				
Social order	-.010466	1			
Freedom	.174**	.0287412	1		
Cultural contents	-.076106	-.152**	-.003065	1	
Effective	.115*	-.030599	.0578267	-.132**	1

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

The correlation results suggest that moderate media not only report on the political system (government or politicians) and interest groups but also civil society; they used more diverse and complex voices. Moreover, moderate media used the frame of effectiveness ($M = .40$, $S.D. = .49$) more than other media (Table 22).

Table 22: Overall Frame by Media

Frame	Media	*n	*N	Mean	SD
Child-Protect	Con	246	340	.72	.45
	Mod	154	191	.81	.4
	Web	184	482	.38	.49
	Total	584	1013	.58	.49
Social Order	Con	85	340	.25	.43
	Mod	163	191	.85	.35
	Web	320	482	.66	.47
	Total	568	1013	.56	.5
Freedom	Con	70	340	.21	.4
	Mod	37	191	.19	.4
	Web	179	482	.37	.48
	Total	286	1013	.28	.45
Cultural Contents	Con	180	340	.53	.5
	Mod	116	191	.61	.49
	Web	246	482	.51	.5
	Total	542	1013	.54	.5
Effective-Ness	Con	67	340	.2	.4
	Mod	77	191	.4	.49
	Web	119	481	.25	.43
	Total	263	1013	.26	.44

*n: number of frames within Media

*N: number of articles within Media

While webzines and conservative media directly expressed their views, moderate media tended to use a higher degree of nuance. In terms of frames that support regulation, webzines used the social order frame ($M = .86$, $S.D. = .35$) more than the child protection frame, which is most often used by conservative media ($M = .74$, $S.D. = .44$). In addition, webzines used the

frame of individual freedom ($M = .44$, $S.D. = .50$) more often than other media. This means that mainstream news media (including both conservative and moderate media) opposed regulation from an institutional perspective while webzines focused more on the personal angle of individual rights.

As discussed, while conservative media used the frame of child protection and cultural contents most often, the child protection frame was used together with another frame that supports regulation, and the cultural contents frame was not used with other frames that oppose regulation. Regarding the combination of frames, conservative media used frames of similar positions when supporting regulation, and the cultural contents frame was used when opposing regulation. While conservative media tended not to use frames of differing positions in the same article, moderate media and webzines did do this but in differing combinations.

Difference between and within media on frames

The most significant change from the second period to the third period is the increased use of the cultural contents frame and decreased use of the effectiveness frame (Table 23). It is important to note that such changes may relate to changing dynamics between media and the differing outcomes for the two bills. The logic that opposes regulation changed from individual rights and potential effect of regulation to cultural aspects of games. It indicates that the opposite paradigm changes from *opposition of regulation* (blanket opposition to regulation) to new paradigm of protecting or promoting *cultural industry* or so-called Korean Wave's cultural contents. Unlike the second period where there was a diversity of voices and the Shutdown Bill passed, the existence of a converged logic of protecting game contents among media may relate to the pending nature of the Game Addiction bill in the third period.

Table 23: 2nd Period Frame and 3rd Period Frame

2nd Period Frame						3rd Period Frame					
Frame	Media	*n	*N	Mean	S.D.	Frame	Media	*n	*N	Mean	SD
Child-Protect	Con	120	163	.74	.44	Child-Protect	Con	126	177	.71	.45
	Mod	128	148	.86	.34		Mod	26	43	.6	.49
	Web	75	152	.49	.5		Web	109	330	.33	.47
	Total	323	463	.7	.46		Total	261	550	.47	.5
Social Order	Con	47	163	.29	.45	Social Order	Con	38	177	.21	.41
	Mod	127	148	.86	.35		Mod	36	43	.84	.37
	Web	102	152	.67	.47		Web	218	330	.66	.47
	Total	276	463	.6	.49		Total	292	550	.53	.5
Free-Dom	Con	22	163	.13	.34	Free-dom	Con	48	177	.27	.45
	Mod	32	148	.22	.41		Mod	5	43	.12	.32
	Web	67	152	.44	.5		Web	112	330	.34	.47
	Total	121	463	.26	.44		Total	165	550	.3	.46
Cultural Contents	Con	75	163	.46	.5	Cultural contents	Con	105	177	.59	.49
	Mod	82	148	.55	.5		Mod	34	43	.79	.41
	Web	62	152	.41	.49		Web	184	330	.56	.5
	Total	219	463	.47	.5		Total	323	550	.59	.49
Effective-Ness	Con	42	163	.26	.44	Effective-ness	Con	25	177	.14	.35
	Mod	67	148	.45	.5		Mod	10	43	.23	.43
	Web	62	152	.41	.49		Web	57	329	.17	.38
	Total	171	463	.37	.48		Total	92	550	.17	.37

*n: number of frame within media

*N: number of article within media

Moreover, there was a difference in the sum of frames. From the second period to the third period, an average sum of frames in an article decreased from 2.4 to 2.0. While moderate

media used an average of 2.9 frames, webzine used 2.4 frames in the second period, and average frame of each media decreased to 2.58 and 2.0. This means that moderate media and webzines expressed their view more straightforwardly in the third period compared to the second. ANOVA testing was conducted on the overall second and third period in order to verify statistical differences among frames within a media group. Except the frame of cultural contents across the periods and effectiveness in the third period, each media group indicated a statistically significant difference. With the convergence of the opposition frame into cultural contents and the increased rate of opposition in the media's overall position on regulation (from 68.3 to 70.5), news media in the third period opposed regulation more straightforwardly but with relatively less complexity/diversity.

Information sources (referred personals or institutions) of the media

As the child protection frame, the government's primary justification for regulation, dominated the coverage, a distribution of sources showed a similar pattern (Table 24). All media turned most frequently to elite sources (both politicians and government); however, each media used politicians and government in a different way (Table 25).

Conservative media used government ($M = .44$, $S.D. = .46$) and interest groups ($M = .45$, $S.D. = .48$) most often. Moderate media also used government ($M = .54$, $S.D. = .50$) most often. Webzines used politicians ($M = .30$, $S.D. = .46$) more often than other media groups. While civil society was cited most often in webzines ($M = .24$, $S.D. = .43$), conservative media used NGOs or individuals ($M = .12$, $S.D. = .33$) less often than those sources in the moderate media.

Table 24: Overall Source

	Pol.	Gov.	Interest. G	Civic S	Academia	Etc.
Conserve	33	98	23	106	37	19
%	10.4	31	7.3	33.5	11.7	6
Moderate	16	74	16	46	10	7
%	9.5	43.8	9.5	27.2	5.9	4.1
Webzine	104	103	59	98	63	27
%	22.9	22.7	13	21.6	13.9	5.9
Total	153	275	98	250	110	53
%	22.9	22.7	13	21.6	13.9	5.9

Source from politicians, government, interest group, civic society, academia and Etc.

In the third period, the appearance of politicians in the discourse of game regulation is significant (Table 25). As the Game Addiction bill (2013) was proposed by politicians from the ruling party in the third period, the dynamics of game regulation has become increasingly nuanced. Together with interest groups and NGOs that also opposed the regulation, politicians expressed their views publicly to oppose government/Ministries that support the regulation, resulting in conflict. Thus, in responding to such changes, the practice of media reporting on game regulation has altered over time.

Table 25: Overall Source by Media

	Media	N	Mean	S.D.
Sum-Source	Conservative	340	2.03	1.67
	Moderate	191	2.56	2.38
	Webzine	482	2.46	1.99
	Total	1013	2.33	1.98
Politician	Conservative	340	.15	.36
	Moderate	191	.15	.36
	Webzine	482	.3	.46
	Total	1013	.22	.42
Government	Conservative	340	.44	.5
	Moderate	191	.54	.5
	Webzine	482	.36	.48
	Total	1013	.42	.49
Interest-Group	Conservative	340	.45	.5
	Moderate	191	.4	.49
	Webzine	482	.4	.49
	Total	1013	.42	.49
Civil Society	Conservative	340	.12	.33
	Moderate	191	.19	.39
	Webzine	482	.24	.43
	Total	1013	.19	.39
Academia	Conservative	340	.16	.37
	Moderate	191	.16	.37
	Webzine	482	.24	.43
	Total	1013	.2	.4

Difference between and within newspapers on sources

In the second period, government, civil society, and academia were the most frequently used sources. While media references to politicians and interest groups increased in the third period, the sources most often used in the second period (government, civil society, and academia) decreased. In detail, interest groups ($M = .60$, $S.D. = .49$) substantially increased in the moderate media. This means that moderate media also reported the rationale of game companies or game associations, which are closely related to promoting the notion of games as cultural contents. This pattern was also shown in the frame analysis. The moderate media opposed the regulation by using the frame of cultural contents in the third period.

Although three sources were frequently used in the second period, two sources were most used in the third period. In the light of such change, differences among media in the sum of sources may play an important role in media discourse.

Like the sum of frames, the number of sources were used in the following order (Table 26): moderate media ($M = 2.56$, $S.D. = 2.38$), webzine ($M = 2.46$, $S.D. = 1.99$), and conservative media ($M = 2.03$, $S.D. = 1.67$). It is important to note that the sum of sources in moderate media ($M = 3.07$, $S.D. = 2.44$) and webzines ($M = 2.52$, $S.D. = 2.13$) increased in the third period. While the average sum of frame decreased from 2.95 to 2.58, the average sum of source increased to more than three. This result suggests that the moderate media reflect diverse voices with the narrower logic.

Table 26: 2nd and 3rd Period Source

2nd period source					3rd period source				
	Media	N	Mean	SD		Media	N	Mean	SD
Sum- Source	Cons	163	2.07	1.77	Sum- Source	Cons	177	1.99	1.57
	Mod	148	2.41	2.35		Mod	43	3.07	2.44
	Web	152	2.31	1.64		Web	330	2.52	2.13
	Total	463	2.26	1.94		Total	550	2.39	2.02
Politicians	Cons	163	.08	.27	Politicians	Cons	177	.21	.41
	Mod	148	.07	.26		Mod	43	.42	.5
	Web	152	.2	.4		Web	330	.35	.48
	Total	463	.12	.32		Total	550	.31	.46
Government	Cons	163	.46	.5	Government	Cons	177	.42	.5
	Mod	148	.58	.5		Mod	43	.42	.5
	Web	152	.39	.49		Web	330	.34	.48
	Total	463	.48	.5		Total	550	.37	.48
Interest Group	Cons	163	.44	.5	Interest Group	Cons	177	.46	.5
	Mod	148	.34	.48		Mod	43	.6	.49
	Web	152	.38	.49		Web	330	.41	.49
	Total	463	.39	.49		Total	550	.44	.5
Civil Society	Cons	163	.14	.35	Civil Society	Cons	177	.1	.3
	Mod	148	.23	.42		Mod	43	.05	.21
	Web	152	.29	.46		Web	330	.21	.41
	Total	463	.22	.41		Total	550	.16	.37
Academia	Cons	163	.23	.42	Academia	Cons	177	.1	.3
	Mod	148	.18	.39		Mod	43	.09	.29
	Web	152	.25	.43		Web	330	.23	.42
	Total	463	.22	.41		Total	550	.18	.38

Attribution of Social Problems

Articles were reviewed to explore the topic, and 154 articles from 2010 to 2015 were analyzed. The inclusion criteria related to the topic of articles and their perspective on violence or addiction as a social phenomenon occurring as negative effects of game playing as opposed to articles that hold positive views of game playing as well as those that had a neutral view that acknowledged social problems but did not argue that game playing was the cause. Since only five articles were found dating from 2004 to 2009, they were excluded from the analysis, and the analysis begins with the year 2010 in order to have a sufficient number of articles to create a meaningful analysis. In this respect, 71% of articles (N = 110) reporting game or (excessive) game playing hold a negative perspective (Table 27).

Table 27: Position on Social problem

	Conserve	Moderate	Webzine	Total
Positive/Neutral	6 (10.2)	16 (21.9)	22 (100)	44 (28.6)
Negative	53 (89.8)	57 (78.1)	0 (0)	110 (71.4)
Total	59 (100)	73 (100)	22 (100)	154 (100)

* () Percent within media

For webzines, no article categorizes immersed gaming for any period of time as addiction or that gaming is the root of any particular social problem. Webzines regarded games in a fundamentally different manner than mainstream news media. Most of the conservative and moderate news hold a negative perspective on gaming and the gaming industry. Indeed, 90% of

conservative media defined excessive game playing as addiction, linking addiction/violence to game playing that lead to social problems that were caused by gamers who played games excessively. Meanwhile, 78% of moderate media expressed a negative view of games or game playing.

Overall, conservative and moderate news blamed individual aspects (62) more often than the game/game company (29) or government/social environment (9) (Table 28), and the difference between the two media was statistically significant. Firstly, conservative media reported the attribution of game/game company (41.5) more than moderate media (17.5) ($\chi^2 = 7.647$, $df = 1$, $p < .01$).

Table 28: Attribution of Social problem			
	Conserve	Moderate	Total
Game/Company	22 (41.5)	10 (17.5)	32 (29)
Individual	23 (43.4)	45 (79)	68 (62)
Government/system	8 (15.1)	2 (3.5)	10 (9)
Total	53 (100)	57 (100)	110 (100)

* () Percent within media

On the other hand, moderate media reported individual attributions (79) more often than conservative media (43.4) ($\chi^2 = 14.706$, $df = 1$, $p < .01$). There is also a difference between the two media on the attribution of government/social environment ($\chi^2 = 4.460$, $df = 1$, $p < .05$), with conservative media using such attribution more often than (15.1) moderate media (3.5).

While webzines did not blame game/game company and individuals, six articles point out the attribution of government/social environment for excessive game playing, arguing that a culture that values extremely long work hours and demeans enjoyment of leisure activities, in both the workplace and school, is responsible for gamers (especially youth gamers) to turn to excessive game playing. Webzines also asked mainstream media to be responsible for their presentation of games and gamers by investigating the empirical evidence before defining games as an *addictive substance* and a major cause of crime baselessly.

Interpretation and implications

Chapter 2 closely described the sociopolitical context of game regulation while examining how the conflicting positions/arguments of each actor converged into regulating games, based on media framing and news sources for two periods. From game regulations in conflicting sociopolitical contexts (making laws) to media framing (making news), this study explored media practice in ideologically distinct outlets and what role the media may play in two differing results of regulatory bills. Moreover, this chapter explored media perspectives on games and attribution of social problems associated with game play.

Most importantly, there was a difference among the three media groups in the way they organize frames. More than half of news articles used more than two frames, meaning that news media reported not only a single idea for or against regulating games but also reported ideas or logics that differ from (or sometimes conflicted with) their own ideological tendency. This practice of media framing also reflects the general tendency of news media. Conservative media reported the regulatory issue more straightforwardly with a relatively small number of frames while liberal and moderate media expressed their views in a more complex way. The result may

suggest that the role of media is not merely as a soapbox for elites but rather media dynamics surrounding game regulation are multifaceted. On the one hand, media play the role of speaker by providing commentary to the audience; on the other hand, they disseminate the opinions of various social actors. In other words, as Bennett's (1990) indexing and Fishman's (1980) models present, news media reliance on elites' sources and the social reality surrounding game regulation was substantially influenced by elites. Journalists themselves were perhaps susceptible to the influence of government officials or politicians. However, news content was not only an outcome of the interaction between journalists and political elites but also interactions between journalists and social actors, such as interest groups or civil society. In the interplay among press interests and state and social actors' importance setting, politicians' policy preferences do not shape media ideology exclusively. Social actors' policy preferences also drive media orientations.

Moreover, in regard to the relationship between the ideological tendencies of media and the realpolitik of the gaming issue, the current study found interesting yet complex results on the outcome of the bills. There might be an ideological/political conflict in conservative media about the overall position of regulation and combination of frames. In general, protecting or promoting industry is an important idea of conservative politics. However, the idea of child protection from game playing was the central regulatory logic of the government, and the potential economically detrimental consequences of regulation to the game industry were largely dismissed. Although conservative media mainly reported the opposite position, they used a combination of two opposing frames, which were child protection that threatens industry and cultural contents that protect industry, rather than using a single frame that solely opposes regulation. Interestingly, media's views on regulation reflected the way media use frames, and thus webzines are no

exception. While conservative and moderate media used a frame of individual aspect (*child protection*), webzines used macro aspect (*social order*) to support regulation. In webzines, the micro (*freedom*) and macro aspects (*social order*) were mixed together.

As discussed, the increased use of the cultural contents frame and the decreased use of the effectiveness frame over the periods may signify changing dynamics among media that affected the different outcomes for the two bills. In fact, it is not certain that there was a reciprocal influence or causal relationship between media framing and actors from the opposition, and consequently we cannot be confident that this feedback mechanism affected policymakers, policy, or the different outcomes for the Game Shutdown Law (which passed) or the Game Addiction bill (which was postponed). Based on evidence and outcomes, it might be that the journalists relied heavily on elites or institutions as news beats during the second period (2010- 2012: Game Shutdown law); however, the growing number of game companies or interest groups/associations as news sources and cultural contents frame regardless of ideological disparity of media in the third period (2013-2015: Game Addiction bill) may reflect a stronger level of influence on the policy decision-making process. In the second period, diverse voices competed within the frames that oppose the regulation. Even in the third period, both moderate and conservative media mainly used the cultural contents frame. In other words, ideologically different media converged into the same ideological tendency in protecting games from the Game Addiction bill. This result also indicates that conservative media may play an adversarial role in checking strong institutional powers over forceful law (Hanitzsch, 2007).

From a normative perspective, news framing plays both a positive and a negative role. News framing helps the general public understand complex issue more easily, yet it may also function as a means of manipulating or deceiving the public. Previous studies found that

mainstream media in Korea was biased towards the negative aspects of gaming effects via use of terms such as *addiction* instead *overindulgence* (Park, 2014). The current study found that media frames, sources, and position might have played important roles both in the passing of the Game Shutdown Law (2011) as well as the postponement of the Game Addiction bill (2013).

Regarding the result of media's view on games and attribution of social problems to game playing, while webzines remained constant in their stance on game issues and criticized the behavior of mainstream media, the mainstream media itself (both conservative and moderate news) did not have a solid position on games, gamers, and game regulation.

Conservative media opposed game regulation with the cultural contents frame and sourced from the game industry or game interest groups; at the same time, they contradicted themselves by criticized gaming as addictive and the origin of social problems while blaming individual gamers and games/game company for these problems. While moderate media opposed game regulation with the frames of cultural contents and effectiveness of government led-regulation, they criticized games as addictive or violent and argued that individual gamers/family members were to blame for the problems. Additionally, moderate media proposed an individual solution to game-related problems via individual responsibility (self-control) rather than government intervention or institutional/systematic approach. As frames that oppose regulation indicated, moderate media believed that government should not be a subject of regulation due to the ineffectiveness of government intervention.

In conclusion, mainstream media opposed game regulation but defined immersed game playing as addiction and such addiction causes supposedly addicted gamers to commit crimes. Holding this logic, mainstream media are ambivalent about game issues and such journalistic

behavior makes the game issues more complex and may foster biased/dualistic views on games, game playing, and game regulation among the public.

However, there are some limitations on the media content analysis. First, the number of articles from liberal/moderate (188 articles) and conservative newspapers (340 articles) is highly unbalanced with conservative newspapers reporting on this issue almost twice as often as liberal/moderate newspapers. Even so, this limitation highlights that conservative newspapers paid greater attention to game regulation. Chosun and Joongang (the first and second in circulation, and most conservative media) covered game regulation issues more than twice of the coverage of total daily newspapers. Second, since current findings are context-dependent, the issue is not general so that the research focus needs to extend to other societies where government regulates game playing, such as China, Thailand, Vietnam, and Germany, for the purpose of cross-object/cross-context generalizability (Chyi & McCombs, 2004). Third is a methodological limitation. Although the technique that I applied depends on counts for the pre-fixed set of logic or arguments is hard to explain the complex dynamics of issue development (Baumgartner, et al., 2004; Wagner & Gruszczynski, 2016), the content analysis that I offered nevertheless provides insight into the relationships among elites and media in-detail for the case that has not been established.

Chapter 2 mainly explored the role of social actors on media framing. It is also important to examine the public's perception towards game regulation and what role media frames have in affecting public views on game regulation. Chapter 3 will analyze public opinion towards the frames to which the public are exposed as well as explore the sources that journalists and the public rely on in this issue.

Based on a survey by MGEF (2012), 74.5% of parents were optimistic about the Game Shutdown Policy, and 49% agreed that it would be good to include those 18 and younger in the policy. However, survey results are anything but consistent. A survey by the Health & Welfare Committee under the National Assembly that consisted of parents and NGOs announced that 84.2% of respondents supported game regulation as of February 2014. The Game Regulation Reform Committee, representing game companies and arts/culture associations, published their own results that 71.8% of respondents oppose game addiction regulation as of June 2014. Interestingly, conservative-mainstream media report the former result while gamers' networks (SNSs) or webzine highlight the results of the later. By doing this, each pole of the spectrum of political elites attempted to influence or even manipulate public opinion on game regulation. Therefore, an objective and balanced survey is needed to discover the public's genuine perception regarding game regulation.

CHAPTER 3. INFLUENCE OF MEDIA DISCOURSE ON PERCEPTION OF GAME ISSUES

The implications of Lipmann and Dewey's conflicting views on public, mass opinion and the role of the media are important to the current study on media discourse on game regulation and gamer participatory behavior: Reaching a social consensus via democratic procedures is key in the policymaking process. One of the basic assumptions of democracy is that the public exists as a self-governing actor and the government should reflect their opinions as the public has the power to choose their representatives. Moreover, both the government and the general public need to acknowledge each other's position before implementing any lawful action. Therefore, specific to this study, I argue that policymakers should consider the perspective of gamer on this issue; even youth gamers could learn about the political process of policymaking and consequently gain political awareness – not only via playing games but also by engaging in game-related activities. However, the Korean government held no public hearings for the Game Shutdown law that was implemented in 2011.

As the game issue gained more attention and politicians publicly expressed their position, the government finally held public hearings on the Game Addiction bill in 2014 in response to game companies, anti-regulation groups, and politicians politicizing the issue publicly. While the Game Addiction bill was suspended, government-led regulation and the media's slanted representation on game issues, especially framing games and gamers as addictive/violent, may have had a strong negative influence on public perception. Due to media sensationalism that, at the very least, media discourse on the game issue in an unbalanced way, the public was not offered the opportunity to gain a comprehensive view of the reality of gaming, creating a moral dilemma that legislators have used as a justification for regulation.

In this chapter, I explore the influence of ideologically differing media exposure and media exposure to game news on public attitudes towards game regulation, public frames on regulation, perception on games, and institutional support. Analytically, I examine the effect of general media usage (ideologically different media outlets) as well as game issue-specified media exposure in order to cover gamers' unique sources of information, such as online game forums or communication within in-game channel (*in-game quest*). The following questions will be discussed:

RQ7: What is the relationship between media use and public opinion on game regulation? Is there any relation between media representation and that of the public (relationship between media use and public attitudes towards overall game regulation)?

RQ8: Do people who read particular media accept the way media frame this issue (relationship between media usage and public framing of game regulation)?

RQ9: Is there any relation between media usage and negative attitudes towards games or gamers?

RQ10: What is the relationship between media use and institutional support?

I argue that use of media impacts public perceptions: Those who consume mass media, conservative media in particular, might tend to think that government-led game regulation is necessary to protect adolescents and to prevent social problems (frame that supports regulation). In addition, those who use in-game channels and/or webzines as information sources tend to think that government-led game regulation violates personal freedom, disregards the potential benefits of gaming, and is ineffective (frame that oppose regulation).

While this study is unable to strictly examine the causal relationship between media and public opinion, if the public accepts media descriptions of the issue, or if the public and media

share a perspective of the issue, this might suggest an effect of media. In analyzing possible media effects on public perceptions, I control for a series of factors, in particular game related variables, interest in game issues, game play hours, and game genre, that may affect public views on game regulation.

Measurement of core concepts

General news exposure (by ideology): Conservative newspaper use (e.g. *Chosun*, *Joongang*, *Donga*) was measured using a single item that asked about the frequency of use of conservative newspaper on a 6-point scale from 0 meaning “never” to 5 meaning “very frequently” ($M = 1.72$, $S.D. = 1.43$). Moderate newspaper use consists of two items that asked about frequency of use of liberal newspaper (e.g. *Hankyoreh*, *Kyunghyang*) and moderate newspapers (e.g. *Hankook*, *Kookmin*, *Seoul*, *Segye*) on a 6-point scale from 0 meaning “never” to 5 meaning “very frequently,” and an index was created by averaging scores across the two measures ($M = 1.93$, $S.D. = 1.31$, $r = .70$). Webzine use (e.g. *Blotter*, *ZDNet*, *Game Mecca*, *Thisisagame.com*) was measured using a single item that asked about frequency of use of webzines on a 6-point scale from 0 meaning “never” to 5 meaning “very frequently” ($M = 1.19$, $S.D. = 1.28$).

Regarding game news exposure, an index of traditional media as source of game news information consisted of three items that asked about the frequency of use of radio, newspapers, and television on a scale from 0 meaning “never” to 5 meaning “very frequently,” and an index was created by averaging scores across measures ($M = 1.95$, $S.D. = 1.09$, Cronbach’s $\alpha = .67$). Online media consisted of two items that asked about the frequency of use of internet and social media, and an index was created by averaging scores across two measures ($M = 2.92$, $S.D. =$

1.32, $r = .60$). In-game media consisted of two items that asked about frequency of use of in-game quest and online forums, and an index was created by averaging scores across the two measures ($M = 1.36$, $S.D. = 1.29$, $r = .77$).

For public perceptions and attitudes towards game issues, attitude on game regulation was measured using a single item that inquired whether respondents support or oppose the overall game regulation on 11-point scale with 0 meaning “fully oppose” and 10 meaning “fully support.” The 0 to 10 measurement was recoded from -5 to +5 where -5 means “fully oppose” to +5 means “fully support” ($M = -.04$, $S.D. = .2.68$).

The regulation support frames were measured by asking respondents whether they agreed or disagreed with the following two statements: “Government-led game regulation is necessary to protect youth (*Child protection*)” and “Government-led game regulation is necessary to prevent (game-related) social problems (*Social order*).” A 6-point scale was used for each item from 0 (totally disagree) to 5 (totally agree). An index of the regulation support frame was created by averaging scores across two measures ($M = 3.14$, $S.D. = 1.45$, $r = .87$).

The regulation opposition frames were measured by asking respondents whether they agreed or disagreed with the following three statements: “Government-led game regulation violates gamers’ personal freedom (*Freedom*),” “Government-led game regulation disregards potential for games as cultural contents (*Cultural contents*),” and “Government-led game regulation is not effective (*Effectiveness*).” A 6-point scale was used for each item from 0 (totally disagree) to 5 (totally agree). An index of the regulation opposition frame was created by averaging scores across measures ($M = 2.71$, $S.D. = 1.14$, Cronbach’s $\alpha = .80$).

Institutional evaluations were measured by asking respondents to rate institutions based on their position in game regulation. A 3-point scale was used for each item from -1 (dislike), 0

(neutral), and 1 (like) on the “Ministry of Health and Welfare,” “Ministry of the Gender Equality & Family,” “Ministry of Culture, Sports and Tourism,” and “Ministry of Science, ICT and Future Planning.” The first two Ministries support the forceful game regulation (Game Shutdown); the other two Ministries oppose the forceful game regulation rather take a stand for minimum institutional intervention (Selective Game Shutdown). I assume that gamers rate the first two Ministries and the other two Ministries differently due to the position of these Ministries on the forceful game regulation. However, the correlation between two groups of institutions is high ($r = .050$, $p < .001$) so that an index of institutional evaluation was created by averaging scores for all the Ministries ($M = -.33$, $S.D. = .50$, Cronbach’s $\alpha = .74$).

Negative views on games were measured on three sets of words-perception items by asking respondents which words come to mind when thinking about games: “Addiction” vs. “Leisure/Hobby,” “Violence” vs. “Social,” and “Gambling” vs. “Art/Culture.” A 5-point scale was used for each item from left (5) to right (1), where “5” means strong negative view on games (reverse coded). An index of negative views on games was created by averaging scores across measures ($M = 2.84$, $S.D. = .87$, Cronbach’s $\alpha = .79$).

Predicting public attitudes towards game regulation

A multiple hierarchical regression was performed in order to examine the relationships between media use and public attitudes towards game regulation including a) support game regulation, b) frames that support game regulation, c) frames that oppose game regulation, d) negative perception of games, and e) institutional rating. For the analysis, demographic variables (gender, age, education, income, status/existence of children), game issue interest, ideology, and game play hours were included in the first block of the equation. In the second block, I entered

the variables of general media exposure on ideologically different media including conservative newspaper, liberal & moderate-newspaper, and webzine. In the third block, I entered variables of media exposure on game related information including mainstream mass media, online media, and in-game media. While variables in the second and third block both measured media usage, the former is related to ideologically differing media exposure, and the latter is related to media exposure to game related issues.

The model for attitude on game regulation explained 14.3% of the variance (Table 29). Among demographic variables, gender ($\beta = .134, p < .001$), age ($\beta = .19, p < .001$) and status of children ($\beta = .075, p < .01$) were significant predictors of attitude on game regulation (10.1% incremental variance).

Exposure to ideologically different media accounted for 1.9% of incremental variance. While conservative newspaper use ($\beta = .153, p < .01$) was positively related to attitude on game regulation, webzine ($\beta = -.083, p < .05$) was negatively related to attitude on game regulation.

Game news exposure accounted for 2.3% of incremental variance. Mass media ($\beta = .197, p < .001$) was a significant predictor of attitude on game regulation. This suggests that those who are female, older, have children, use conservative newspaper, and who are exposed to game news from mass media were more likely to support game regulation. However, webzine readers were more likely to oppose game regulation.

Then I turned my attention to explaining frame adoption. The model for frame that supports game regulation explained 18.4% of the variance (Table 30). Gender ($\beta = .143, p < .001$), age ($\beta = .263, p < .001$), status of children ($\beta = .061, p < .05$), and ideology ($\beta = .054, p < .05$) were significant predictors of frame that supports game regulation (13.4% incremental

variance). This suggests that those who are female, older, have children, and are conservative tend to agree with the frame of regulation support.

Table 29: Support Game Regulation

	Block 1	Block 2	Block 3
Block 1: Demographics & Game			
Gender (male=1)	.134***	.137***	.122***
Age	.19***	.176***	.137***
Education	-.025	-.033	-.030
Income	.038	.020	.016
Children (under 20s)	.075**	.085**	.074**
Game issue Interest	.033	.019	-.012
Ideology	.106***	.069*	.056
Play hours	-.047	-.038	-.026
<i>Incremental R² (%)</i>			10.1***
Block 2: General News-ideology			
Conservative News		.153**	.102**
Moderate News		-.002	-.028
Webzine		-.052	-.083*
<i>Incremental R² (%)</i>			1.9***
Block 3: Game News exposure			
Mass Media			.197***
Online Media			-.010
In Game Media			-0.01
<i>Incremental R² (%)</i>			2.3***
Total R ² (%)			14.3

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; $N = 1362$

Exposure to ideologically different media accounted for 1.8% of incremental variance. Conservative newspaper ($\beta = .101, p < .001$) and webzine ($\beta = -.129, p < .001$) use were significant predictors but in opposing ways. While the effect of webzine remains significant, conservative newspaper dropped to non-significance when game news exposure variables were

entered. This suggest that exposure to conservative newspaper indirectly influences the frame of regulation support via game news exposure. Webzine readers tend to believe that government intervention on game regulation cannot be justified under the frame of child protection and social order.

Table 30: Frame-Support Regulation

	Block 1	Block 2	Block 3
Block 1: Demographics & Game			
Gender (male=1)	.143***	.136***	.117***
Age	.263***	.247***	.21***
Education	-.028	-.029	-.029
Income	.032	.027	.023
Children (under 20s)	.061*	.066*	.059*
Game issue Interest	-.012	.015	-.024
Ideology	.08**	.054*	.045
Play hours	-.061	-.044	-.033
<i>Incremental R² (%)</i>			13.4***
Block 2: General News-ideology			
Conservative News		.101***	.049
Moderate News		-.015	-.042
Webzine		-.129***	-.16***
<i>Incremental R² (%)</i>			1.8***
Block 3: Game News exposure			
Mass Media			.183***
Online Media			.066*
In Game Media			-.018
<i>Incremental R² (%)</i>			3.2***
Total R ² (%)			18.4

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; $N = 1362$

Exposure to game news accounted for 3.2% of incremental variance. Mass media ($\beta = .183, p < .001$) and online media ($\beta = .066, p < .05$) were significant predictors. That is, those

who were exposed game news from mass media and online media tend to support the logic that supports regulation.

The model for frame that opposes game regulation explained 11.4% of the variance (Table 31). Gender ($\beta = -.094, p < .001$), age ($\beta = -.112, p < .001$), status of children ($\beta = -.075, p < .01$), game issue interest ($\beta = .094, p < .01$), and game play hours ($\beta = .102, p < .001$) remain significant when ideologically different media use and exposure to game news were entered the model.

Table 31: Frame-Oppose Regulation

	Block 1	Block 2	Block 3
Block 1: Demographics & Game			
Gender (male=1)	-.097***	-.098***	-.094***
Age	-.144***	-.140***	-.112***
Education	.022	.018	.011
Income	-.063*	-.060	-.055
Children (under 20s)	-.080**	-.088**	-.075**
Game issue Interest	.090**	.087**	.094**
Ideology	-.038	-.010	.007
Play hours	.109***	.110***	.102***
<i>Incremental R² (%)</i>			.9***
Block 2: General News-ideology			
Conservative news		-.085**	-.051
Moderate news		.074*	.088**
Webzine		.003	.027
<i>Incremental R² (%)</i>			.6*
Block 3: Game News exposure			
Mass Media			-.154***
Online Media			.137***
In Game Media			-.033
<i>Incremental R² (%)</i>			1.8***
Total R ² (%)			11.4

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 1362

This suggests that those who are male, younger, have no children, are interested in game issues, and play games longer tend to support the frame that opposes game regulation.

Exposure to ideologically different media accounted for .6% of incremental variance. Conservative newspaper ($\beta = -.085, p < .01$) was negatively related to the frame that opposes game regulation, yet moderate newspaper ($\beta = .074, p < .05$) was positively related. While the effect of moderate newspaper remained significant, conservative newspaper dropped to non-significance when game news exposure variables were entered.

Exposure to game news accounted for 1.8% of incremental variance. Mass media ($\beta = -.154, p < .001$) and online media ($\beta = .137, p < .001$) were significant predictors. That is, those who are exposed to game news from mass media tend to believe that games should not be protected by individual freedom, games are not cultural contents, and game regulation is effective. Yet, gamers who are exposed to game news from online media are more likely to support the logic that opposes regulation.

If I consider instead negative perceptions about games, the model explains 10.2% of the variance (Table 32). In the first block, gender ($\beta = .132, p < .001$), age ($\beta = .162, p < .001$), status of children ($\beta = .077, p < .01$), game issue interest ($\beta = -.134, p < .001$) and game play hours ($\beta = -.066, p < .05$) were significant predictors of having a negative perception of games (9.4 % incremental variance). This suggests that those who are female, older, and have children but are less interested in game issues and play games for shorter periods of time tend to perceive games negatively. The effect of game play hours remained significant when ideologically different media variables were entered.

While exposure to ideologically different media variables accounted for .4% of incremental variance, only webzine ($\beta = -.071, p < .001$) negatively predicts negative perception on games. This suggests that webzine users tend not to believe games have negative aspects. However, webzine use dropped to non-significant when game news exposure variables entered in the model.

Table 32: Negative perception of game

	Block 1	Block 2	Block 3
Block 1: Demographics & Game			
Gender (male=1)	.132***	.127***	.124***
Age	.162***	.157***	.144***
Education	-.037	-.041	-.040
Income	.043	.042	.042
Children (under 20s)	.077**	.074**	.069**
Game issue Interest	-.134***	-.123***	-.118***
Ideology	-.013	-.005	-.011
Play hours	-.066*	-.055*	-.045
<i>Incremental R² (%)</i>			9.4
Block 2: General News-ideology			
Conservative news		-.009	-.028
Moderate news		.057	.054
Webzine		-.071*	-.058
<i>Incremental R² (%)</i>			.4
Block 3: Game News exposure			
Mass Media			.075*
Online Media			-.038
In Game Media			-.050
<i>Incremental R² (%)</i>			.4
Total R ² (%)			10.2

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 1362

Game news exposure variables accounted for .4% of incremental variance; mass media exposure ($\beta = .075, p < .05$) was positively related to negative perception on games. Thus, respondents who read or watch about game topics via mass media tend to think that games are violent and addictive. The implication of media influence on perception of games will be addressed in the discussion.

The model for institutional rating explained 10.2% of the variance (Table. 33). Among demographic variables, gender ($\beta = .149, p < .001$), age ($\beta = .178, p < .001$), education ($\beta = -.095, p < .01$) and ideology ($\beta = .089, p < .01$) appeared as significant predictors of institutional rating (8.1% incremental variance). This suggests that those who are female, older, less educated, and conservative tend to support institutions related to game regulation. The contribution of gender, age, and education remain significant when considering both ideologically different media and game news exposure. The effect of ideology dropped to non-significant when ideologically different media were entered in the model.

The exposure to ideologically different media variables accounted for 1.6% of incremental variance. While conservative newspaper ($\beta = .152, p < .001$) was positively related to institutional support, moderate newspaper ($\beta = -.075, p < .05$) was negatively related to institutional support. Interestingly, the effect of both remained significant yet decreased when game news exposure was introduced. The implications for this will be addressed in the discussion.

Table 33: Institution Rating

	Block 1	Block 2	Block 3
Block 1: Demographics & Game			
Gender (male=1)	.149***	.156***	.148***
Age	.178***	.171***	.157***
Education	-.095**	-.096**	-.096**
Income	.032	.018	.016
Children (under 20s)	-.005	.008	.005
Game issue Interest	.043	.022	.004
Ideology	.089**	.045	.042
Play hours	-.004	-.008	-.006
Incremental R ² (%)			8.1***
Block 2: General News-ideology			
Conservative news		.152***	.133***
Moderate news		-.075*	-.087**
Webzine		.024	.004
Incremental R ² (%)			1.6***
Block 3: Game News exposure			
Mass Media			.068
Online Media			.023
In Game Media			.014
Incremental R ² (%)			.5
Total R ² (%)			10.2

Entries are standardized regression coefficients;

Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Implication and interpretations

This chapter explored the influence of ideologically differing media exposure and media exposure to game news on attitudes towards game issues. The findings support that news media exposure plays an important role in strengthening attitudes, and media exposure to a specific issue has an impact on certain newspaper readers. Yet, the results suggested that effects of ideologically different media and public attitudes on game regulation were complex, due to the influence of real world politics and ideological tendencies of the media. First, exposure to mass

media that highlights the negative aspects of games has strong impacts on attitudes towards game regulation and leads people to agree with the idea that game playing has negative connotations. Second, media frames in content analysis and the public's frames in the results of the survey have similar results, reflecting the ideological tendencies of news media in Korea. Third, game play hours strengthened public adoption towards frames that oppose regulation and weakened negative perception on games.

It is not surprising that those who are least familiar with gaming, namely those who play games relatively less (females and older people) as well as those who have children under the target age of game regulation tend to view games negatively and align with the frame of game regulation support. Yet, education, income and, ideology were not related to attitude toward game regulation. In regard to the relationship between public attitudes towards media frames and play hours, game play hours was mediated via ideologically different media and game news exposure in predicting the frame that supports regulation, yet it has both a direct and an indirect effect on the frame that opposes regulation. This result suggests that, in considering public opinion formation regarding media framing among the gamer population, the effect of game playing was stronger in supporting the logic of opposing game regulation than in opposing the logic of supporting regulation. Though game play hours were not significantly associated with attitudes towards game regulation (pros and cons), it strengthened opinions towards media frames and weakened negative perception of games.

Regarding exposure to ideologically different media, the dynamics of media effects of public attitudes on game regulation are multidimensional. Conservative politics in the Korean context is prone to regulate contents of media, and so conservative people in this study are inclined to support regulation (correlation $r = .136$). It is also natural that conservative people

support government administration and government institutions. Those who read conservative newspapers support game regulation, adhere to the logic that supports game regulation, and support government institutions. However, the result of content analysis suggests that the majority of news articles in conservative newspapers oppose game regulation (63.5%). When game news exposure variables were entered the model, the effect of conservative newspaper on overall regulation and institutional support decreased. This suggests that, after reading or watching about game issues via mainstream mass media (including newspaper), the influence of conservative newspaper that follow real-world conservatism (supporting regulation) decreased. The result indicates that influence of media exposure on game issues was significant enough to change public attitudes; specifically, it has a significant impact on conservative newspaper readers' attitudes towards game regulation.

The content analysis of ideologically different media and public attitudes towards the logic of supporting or opposing regulation confirmed the ideological tendency of news media in Korea; conservative newspaper emphasized the frames for supporting regulation, yet moderate newspaper underlined the frames for opposing regulation. These results reflect the politics of the real world. People who read conservative newspaper tend to support the logic for supporting regulation, i.e. child protection and social order, while moderate newspaper readers tend to view government intervention on games as ineffective and a violation of personal freedom that fails to acknowledge games as cultural content.

In regard to the relationship between frames that ideologically different media use, the result of this study confirmed the influence of game news on public frames/logics of game regulation. When considering game news exposure, the effect of conservative newspaper on supporting the logic of regulation decreased ($\beta = .101$ to $\beta = .049$) and dropped to non-significant

while in opposing the logic of regulation moderate newspaper increased ($\beta = .077$ to $\beta = .088$). This result indicates that the effect of game news weakens the effect of the ideological tendency of conservative news since the result of game news content analysis suggested that conservative newspaper opposed regulation (67.8% in the third period) with frames that oppose regulation. Likewise, game news slightly strengthened the effect of the ideological tendency of moderate news based on content analysis (53.5% in the third period). The different predicting power (standard coefficient) may reflect the ratio of opposition (67.8% for conservative news vs. 53.5% for moderate news). Parallel to the result of frames that support regulation, the increasing effect of conservative newspaper on opposing the logic of regulation ($\beta = -.085$ to $\beta = -.051$) and the drop to non-significance can be explained by the effect of game news on public frames. Conservatism that favors regulation decreases via the framing effects of game news.

It is interesting to note that the effect of conservative and moderate newspaper on institutional support decreased when game news exposure was entered in the model. Based on the content analysis, both conservative newspaper and moderate newspaper referred to government institution as a news source (more than 30% of source total). Though we do not know the causal link between changing newspaper effects on institutional ratings and public support of institutions, it may be interpreted that gamers dislike the intervention of government into game regulation regardless of their institutional rating.

The effects of online news exposure on frames is intriguing, since online news strengthened both frames that contradict each other. Unlike the ideologically different media, effect of online media is highly depended on its users; it might be true that people selectively expose to information that matches their existing value or position. Yet, the predicting power of online media was much stronger in the case of frames that oppose regulation. This means that

gamers who get game information online are more likely to support the frames for opposing regulation.

The result obtained in this study also suggests that game news exposure via mass media (TV, radio, and newspaper) leads people to support regulation, influences people to believe games as harmful, and strengthens the logic of supporting regulation while simultaneously weakening the logic that opposes regulation. In addition, when predicting negative perception of games, the effect of webzine that is oriented to opposing game regulation and influencing people to believe games have various positive aspects was diminished ($\beta = -.071$ to $\beta = -.058$) and also drop to nonsignificant when game news exposure entered. That is, mass media that highlight the negative aspects of games (notions of violence, addiction, and gambling) have strong impacts on public perception towards games, which may ultimately affect attitudes towards game regulation.

CHAPTER 4. GAME COMMUNITY AND GAMERS AS POLITICAL ACTORS

To explain the mechanism of gamer participatory behavior, and especially the role of media and communication as a mediator in participation, I will apply the communication mediation model to the gamer participation model as the communication mediation model allows us to understand the predictive power of gamer networks, media exposure, discussion, and community building for participatory behaviors as well as the relationships among these variables. In the model, media serve as an information source for surveillance, and interpersonal communication mobilizes gamers to further actions. Moreover, by applying the communication mediation model, it becomes possible to analyze whether gamer communities serve as a networked public sphere and influence mobilization.

The communication mediation model (McLeod et al., 1996; McLeod, Scheufele & Moy, 1999; McLeod et al., 2001) reflects Markus and Zajonc's (1985) O-S-O-R framework: The first O (orientation) represents demographic attributes, community integration, and situational variables; the S (stimulus) represents communications such as news use and political discussion; the second O (orientation) considers subsequent orientations, such as knowledge, cognitive complexity, and political efficacy, that mediate the relationship between communication and participation; and the R (response) considers the subsequent behavioral response. Building on this idea, the O-S-R-O-R model of campaign communication mediation (Shah et al., 2007) incorporates the interrelated reasoning (R) processes, which involves cognitive reflections that channel campaign exposure and news consumption on political participation. While interrelated reasoning (R) processes via the gamer community may indeed provide space for cognitive reflection/complexity (reasoned argumentation) (Cappella, Price, & Nir, 2002; Kim, Wyatt, &

Katz, 1999), deep conceptual understanding (McLeod et al., 2001), and a means for building social capital (trust, community involvement and belonging), I contend that gamer communities serve as a networked public sphere where gamers share diverse ideas and views; thus, game communities become a source of information, a place of deliberation, and a site of diversification. Therefore, gamer participation aligns with the O-S-O-R framework

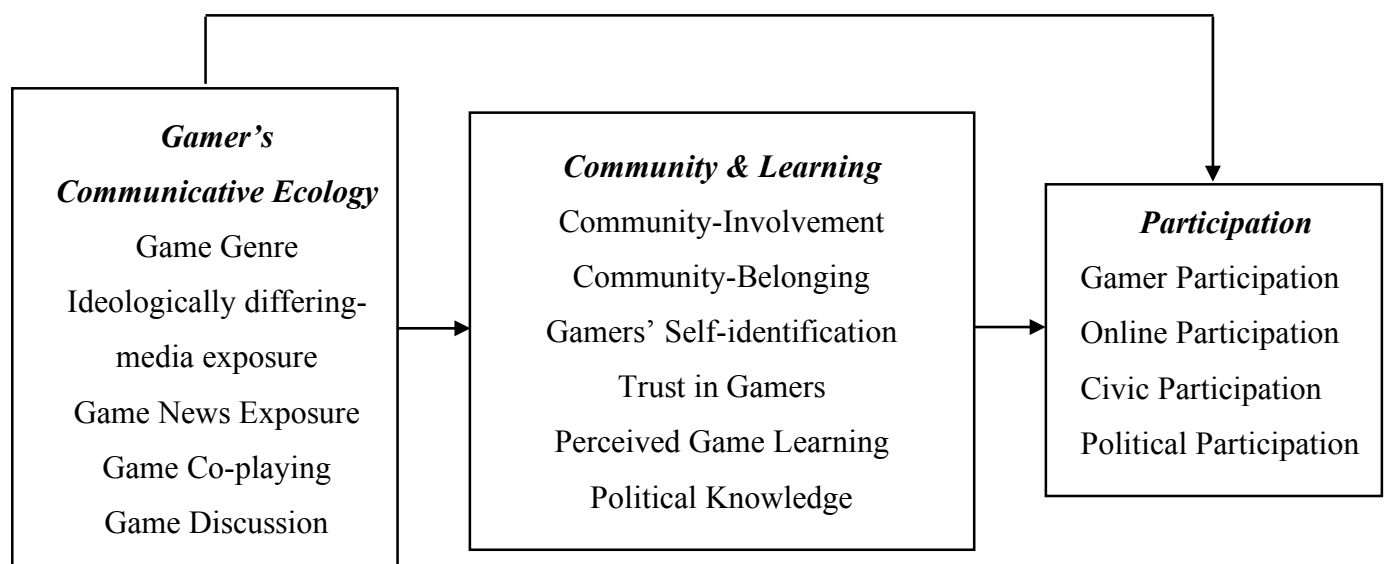


Figure 3: Direct and indirect influences of gamers' communicative ecology on participation

In the model, I conceptualize game genre, media use, networks (co-players), and discussion as gamer's communicative ecology/environment (Figure 3). To conceptualize this communicative ecology, I follow the idea of communicative ecology as "the context in which communication processes occur" (Foth & Hearn, 2007, p. 9). While McLuhan and Postman's definition of media ecology takes a media-centric view (McLuhan, 1964; Postman, & Eurich, 1970), Hearn and Foth (2007) conceptualize communicative ecology by emphasizing "the meaning that can be derived from the socio-cultural framing and analysis of the local context

which communication occurs in” (p. 1). Communicative ecology consists of three layers (Foth & Hearn, 2007): technological, social, and discursive. A technological layer involves media that enable communication; a social layer consists of people and modes of organizing those people; and a discursive layer includes the content of communication. In gamer’s communicative ecology, as well as media exposure, games (genre) are a technological layer as games are an important mode of communication for gamers and, by playing a certain game genre, gamers are more likely to be involved in communication. Game Co-playing or gamer communicative networks is regarded as a social layer. While communicative ecologists consider a discursive layer as content or themes of communication, I define this layer by adding an act of communicating (discussion) about game issues (themes/content) in gamer’s communicative ecology.

In the gamer O-S-O-R model, as well as demographic attributes, orientation (O) in the model includes ideology, interest in game issues, and game play hours as gamer situational variables. I divide stimulus (S) into two parts: stimulus 1 as media usage and stimulus 2 as discussion, assuming media exposure and game news exposure antecedes game discussion and game networks (online and offline game co-playing, guild members). The first stimulus (media use) represents ideologically differing news exposure and news exposure on game related issues. For the second stimulus (interpersonal communication), I stress gamer social networks (game co-playing) and discussion as an antecedent of community involvement, sense of community belonging, perceived identity of gamers, trust in other gamers, perceived sociopolitical learning via game playing, and political knowledge (as the second O; subsequent orientations).

For response (R), the gamer participation model not only explores civic and institutional participation but also online-only activities, such as online expression and online political

activity. This is because individuals may only participate via online activity or vice versa. By exploring gamer participation, I seek to understand what influences gamer activities have on participation and attempt to expand the communication mediation model on issue-specific participation by adding gamer's communicative ecology.

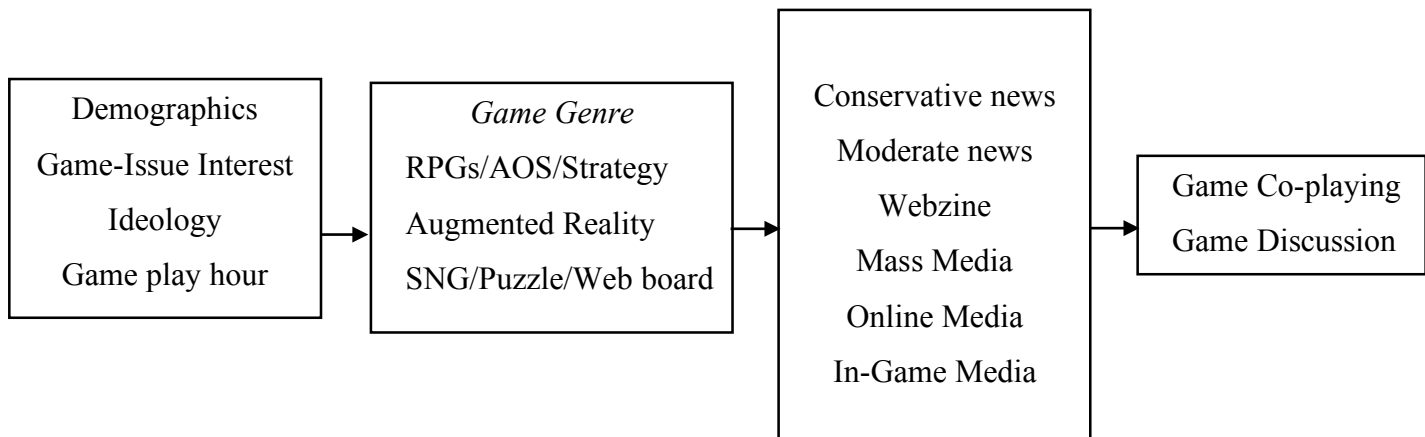


Figure 4: Influence dynamics within Gamers' communicative ecology

In order to analyze in-depth and detailed dynamics including a) relationships within gamer's communicative ecology (Figure 4, Chapter 4-1 & 4-2), b) relationships between gamer's communicative ecology and gamer community activities (Chapter 4-3), and c) roles of the gamer participation model on participations (Chapter 4-4 & 4-5), the current study offers not only an analysis of the predictive power of variables in the final model – namely, how gamer's communicative ecology and game community/learning predict participation – but also an exploration of which variables predict gamer's communicative ecology and community/learning. Dependent variables in the preceding models will be treated as independent variables in the final model. Thereby, I trace how each variable change when other variables are introduced in the model to deeply understand the roles of games, gamer communication, and community activities.

4-1. Gamers' Media Use: Ideologically differing media exposure and media exposure on game news

Because media use for surveillance purposes allows people to gain political information that augments political interests and knowledge, news not only provides information but also insight into collective problems. Thus, media further contributes as an information source for discussion to solve collective problems and influence participatory behaviors. Regarding the effect of media as medium vs. content, scholars in previous studies examined the medium-specific effect of media (positive effect of newspaper reading vs. negative effect of television watching) and content-specific influence (positive effect of informational use vs. negative effect of recreational/entertainment use) as predictors of participation (Holbert, Kwak, & Shah, 2003; Shah, 1998; Shah, McLeod, & Yoon, 2001; Vincent, & Basil, 1997).

Since the issue of game regulation is a niche subject and consumption of game related news may be affected by game playing and interest in game issues, I analyze a variety of information sources, not only traditional vs. online media (medium-specific) but also issue specified sources (online webzine) and the broader ideological tendencies of media. Conservative newspapers, liberal & moderate newspapers, and webzines are included to balance the ideological tendencies of any one source and compare the effects of mainstream news media to online media. In addition, in terms of medium-specific, this study will consider traditional media (television, radio, newspaper), online/Internet, and in-game quest or in-game chatting as sources of game news information.

In order to analyze media influence on public perception, specifically the relationship between media use and overall regulation on games, public frames, negative view of games, and institutional ratings, is related to gamer participation, I will first examine the role of interest in

game issues, game play hours, and game genre on ideologically differing media exposure and game news exposure. Based on the time displacement hypothesis, it might be true that game play hours will be negatively related to news use yet positively related to game related media. Thus, I offer the following hypotheses:

H1: Game play hours will be negatively related to mainstream newspaper use.

H2: Game play hours will be negatively related to exposure to mainstream mass media.

H3: Game play hours will be positively related to use of game related media including webzine and in-game quest/community.

However, game genre may affect media use in different ways. It is possible that game genre correlates positively to game related media, yet for ideologically differing media exposure no study has explored the relationship between game genre and use of ideologically different media. Thus, I offer the following research question:

RQ11: Will specific game genre playing relate to ideologically differing media exposure?

In Chapter 4-4, I will additionally explore how two aspects of media use (type of medium and ideological differences) serve as antecedents or mediators of participatory behaviors in the gamer participation model.

Measurement of core concepts

In 2014, Son, a politician from a conservative party, blamed RPGs (Role Playing Games, e.g. Lineage, World of Warcraft, MapleStory) and the AOS (Aeon of Strife, e.g. League of Legend, Heroes of the Storm) game genre for causing negative, addictive behaviors due to collective-party oriented game characteristics. The line of thinking is that pressure from peer gamers (guild members or co-playing) causes excessive game playing and ultimately leads to

game addiction. Moreover, the immersive features of some Strategy genre games, such as Civilization and Football Manager, have garnered nicknames such as game of evil or game of addiction.

Based on the similarity of play characteristics (online-pc based, playing with multiple gamers, and arguably addictive features), game playing frequency of the RPGs (including MMORPGs), AOS, and Strategy games are combined into a single item (RAS) ($M = 1.08$, $S.D. = 1.24$, Cronbach's $\alpha = .75$) where 0 means never to 5 meaning very frequently.

The Augmented Reality (AR) genre was measured by a single item asking frequency of game play where 0 means never to 5 meaning very frequently ($M = 2.09$, $S.D. = 1.80$).

The SNG/Puzzle/Web board genre (SPW) was measured by a single item asking frequency of game playing in this genre with 0 meaning never to 5 meaning very frequently ($M = .59$, $S.D. = 1.14$).

Predicting media usage

A multiple hierarchical regression was performed to examine whether playing a specific game genre predicts use of a) conservative newspaper, b) liberal & moderate-newspaper, c) webzine, d) mainstream mass media, e) online media, and f) in-game media. Demographic variables (gender, age, education, income, status/existence of children), game issue interest, ideology, and game play hours were included in the first block of the equation. In the second block, I entered the game genre variables (RAS, AR, SPW).

The model for conservative newspaper explained 19.8% of the variance (Table 34). Demographic variables, game issue interest, ideology, and game play hours were important predictors (17.1% incremental variance) of conservative newspaper use. Upon entry, gender ($\beta =$

-.052, $p < .05$), age ($\beta = .07$, $p < .05$), education ($\beta = .059$, $p < .05$), income ($\beta = .110$, $p < .001$), status of children ($\beta = -.065$, $p < .05$), game issue interest ($\beta = .167$, $p < .001$), ideology ($\beta = .224$, $p < .001$), and game play hours ($\beta = -.071$, $p < .05$) were significant predictors of conservative newspaper use. This suggests that those who are male, older, more educated, have higher incomes, are more conservative, and interested in game issues, but do not have children under 20, are more likely to read conservative newspapers.

Game genre accounted for 2.7% of incremental variance. RAS ($\beta = .078$, $p < .05$) and AR ($\beta = .124$, $p < .001$) positively contributed to conservative newspaper use. The implication will be addressed in the discussion.

Table 34: Conservative News

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	-.046	-.052*
Age	.068*	.070*
Education	.066*	.059*
Income	.137***	.110***
Children (under 20s)	-.067*	-.065*
Game issue Interest	.216***	.167***
Ideology	.236***	.224***
Play hours	-.025	-.071*
<i>Incremental R² (%)</i>		17.1***
Block 2: Game Genre		
RAS (RPGs, AOS, and Strategy)		.078*
AR (Augmented Reality)		.124***
SPW (SNG/Puzzle/Web board)		.022
<i>Incremental R² (%)</i>		2.7
Total R ² (%)		19.8

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 1362

The model for moderate newspaper use explained 18.3% of the variance (Table 35). Demographic variables, game issue interest, ideology, and game play hours were important predictors (13.4% incremental variance) of moderate newspaper use. Upon entry, education ($\beta = .126, p < .001$), income ($\beta = .116, p < .001$), game issue interest ($\beta = .262, p < .001$), ideology ($\beta = -.113, p < .001$), and game play hours ($\beta = -.059, p < .05$) were significant predictors of moderate newspaper reading, and these variables remained significant when game genre was included.

Table 35: Moderate News

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	-.037	-.053*
Age	.025	.037
Education	.126***	.112***
Income	.116***	.078**
Children (under 20s)	.027	.027
Game issue Interest	.262***	.203***
Ideology	-.113***	-.125***
Play hours	-.059*	-.131***
<i>Incremental R² (%)</i>		13.4***
Block 2: Game Genre		
RAS		.109**
AR		.127***
SPW		.100***
<i>Incremental R² (%)</i>		4.9***
Total R ² (%)		18.3

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 1362

This suggests that more educated, higher income level, and liberal players who have shorter game play hours were more likely to read moderate newspapers. While gender indirectly influenced moderate newspaper consumption, education, income, game issue interest, ideology, and game play hours have a direct effect on moderate newspaper reading as well as an indirect effect via game genre.

Game genre accounted for 4.9% of incremental variance. RAS ($\beta = .109, p < .01$), AR ($\beta = .127, p < .001$), and SPW ($\beta = .10, p < .001$) positively correlated with moderate newspaper consumption. The implication will be addressed in the discussion.

The model for webzine explained 25.7% of the variance (Table 36). Demographic variables, game issue interest, and game play hours were important predictors (16.9% incremental variance) of webzine use. Upon entry, gender ($\beta = -.086, p < .01$), age ($\beta = -.069, p < .05$), game issue interest ($\beta = .343, p < .001$), and game play hours ($\beta = .12, p < .001$) were significant predictors of webzine reading. This suggests that those who are male, younger, and have higher game issue interest as well as higher game play hours were more likely to use webzine. While age dropped to non-significant when game genre variables were entered, gender and game issue interest remained significant. Age has an indirect effect on webzine usage, and gender and game issue interest have both a direct and indirect effect on webzine usage.

Game genre accounted for 8.8% of incremental variance. RAS ($\beta = .244, p < .001$) and AR ($\beta = .138, p < .001$) positively contribute to webzine use.

Table 36: Webzine

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	-.086**	-.068**
Age	-.069*	-.041
Education	.034	.021
Income	.056	.007
Children (under 20s)	-.018	-.006
Game issue Interest	.343***	.249***
Ideology	-.006	-.025
Play hours	.120***	.020
<i>Incremental R² (%)</i>		16.9***
Block 2: Game Genre		
RAS		.244***
AR		.138***
SPW		.017
<i>Incremental R² (%)</i>		8.8
Total R² (%)		25.7

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; $N = 1362$

The model for mass media exposure explained 37.2% of the variance (Table 37). Demographic variables, game issue interest, ideology, and game play hours were important predictors (21.5% incremental variance) of mainstream mass media exposure. Upon entry, gender ($\beta = .049, p < .05$), age ($\beta = .208, p < .001$), income ($\beta = .086, p < .01$), game issue interest ($\beta = .312, p < .001$), ideology ($\beta = .109, p < .001$), and game play hours ($\beta = -.051, p < .05$) were significant predictors of mainstream mass media exposure; however, gender and income dropped to non-significant levels when game genre variables were entered in the equation. This suggests that those who are female, older, interested in game issues, conservative, and have shorter game play hours were more likely to get game news via mainstream mass media.

Moreover, the contribution of game issue interest, ideology, and game play hours remained significant when game genre was included, suggesting that these factors have a direct effect on exposure to mainstream mass media but also an indirect effect via playing a certain game genre.

Table 37: Mass Media-game news exposure

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	.049*	.045
Age	.208***	.215***
Education	.027	.018
Income	.086**	.054
Children (under 20s)	.033	.037
Game issue Interest	.312***	.254***
Ideology	.109***	.096***
Play hours	-.051*	-.109***
<i>Incremental R² (%)</i>		21.5***
Block 2: Game Genre		
RAS		.106***
AR		.130***
SPW		.031
<i>Incremental R² (%)</i>		3.7***
Total R ² (%)		25.2

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; $N = 1362$

Game genre accounted for 3.7% of incremental variance. RAS ($\beta = .106, p < .001$) and AR ($\beta = .130, p < .001$) positively contributed to exposure to mainstream mass media.

The model for online media exposure explained 9.3% of the variance (Table 38). Among demographic variables, only gender ($\beta = .055, p < .05$) was a significant predictor of online media exposure as a game news source when game genre was included. The contribution of

game issue interest ($\beta = .254, p < .001$) was a significant predictor of online media exposure.

Game issue interest affects online media exposure both directly and indirectly.

Table 38: Online Media-game news exposure

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	.052 [#]	.055*
Age	.021	.045
Education	.051	.041
Income	.019	-.005
Children (under 20s)	-.036	-.033
Game issue Interest	.254***	.216***
Ideology	-.047	-.051
Play hours	.032	-.028
<i>Incremental R² (%)</i>		7.2
Block 2: Game Genre		
RAS		.131***
AR		.012
SPW		.073**
<i>Incremental R² (%)</i>		2.1***
Total R ² (%)		9.3

Entries are standardized regression coefficients;

Significance: [#]p<.1, *p<.05, ** p<.01, *** p<.001; N = 1362

Game genre accounted for 9.3% of incremental variance. RAS ($\beta = .131, p < .01$) and SPW ($\beta = .073, p < .01$) contributed to online media exposure. This suggests that those who are interested in game issues and play RAS and SPW games are more likely to be exposed to game news via online media.

The model for in-game source (game quest/community) explained 30% of the variance (Table 39). Among demographic variables, only income ($\beta = .068, p < .05$) was a significant predictor of exposure to game news via in-game source. Game issue interest ($\beta = .367, p < .001$)

and game play hours ($\beta = .141, p < .001$) were significant predictors of exposure to game news via in-game source. Interest in game issues also has an indirect effect via game genre.

Table 39: In game source-game news exposure

	Block 1	Block 2
Block 1: Demographics & Game		
Gender (male=1)	-.027	-.025
Age	-.006	.016
Education	.000	-.016
Income	.068*	.009
Children (under 20s)	.004	.013
Game issue Interest	.367***	.261***
Ideology	-.011	-.034
Play hours	.141***	.028
<i>Incremental R² (%)</i>		18***
Block 2: Game Genre		
RAS		.233***
AR		.199***
SPW		.056*
<i>Incremental R² (%)</i>		12***
Total R ² (%)		30

Entries are standardized regression coefficients;

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; $N = 1362$

This suggests that higher income, higher interest in game issues, and longer hour game players were more likely to get game related news via in-game quest or the gaming community. Yet, the effect of income and game play hours dropped to non-significant levels when game genre was introduced.

Game genre was anchored in getting news via in-game sources, explaining 12% of variance. RAS ($\beta = .233, p < .001$), AR ($\beta = .199, p < .001$) and SPW ($\beta = .056, p < .05$) contributed to being exposed to game news via in-game quest or the gaming community. While

this suggests that players of all three genres tend to rely on in-game sources for game news, the effect of genre on information seeking was stronger for RAS and AR than SPW.

These results yield some support for H1: Game play hours will be negatively related to mainstream newspapers and H2: Game play hours will be negatively related to exposure on mainstream mass media. H3: Game play hours will be positively related to game related media including webzine and in-game quest/community is partially supported since the effect of game play hours was mediated via game genre.

Implication and interpretations

This section of the chapter explored the role of game genre as an antecedent of various media use. Findings suggest that the influence of game play hours was negatively correlated to newspaper news use and mass media exposure to game information. Even though game play hours was negatively correlated to media use, the results suggested that certain genres of game playing promote media use. Moreover, gamers use webzines and in-game media as information sources and potentially for surveillance to seek information about politics. Based on its antecedent of media use, interest in game issues may operate as political interest.

Overall, demographic characteristics influence newspaper exposure more than alternative media use and game news exposure. Gamers who are male, older, and more educated were more likely to consume newspapers. Yet, demographic effects diminish when media exposure to game related issues is controlled. Like the relationship between entertainment media use and news use, game play hours is negatively correlated to newspaper news use and mass media exposure for game information.

An interesting finding of this chapter is the role interest on the game issue has on media use. The result presented here shows that game issue interest was positively correlated not only to game related media exposure but also general media exposure, and the predictive power of it was strong. Studies have found that political interest is positively related to news use (Boulianne, 2011; Strömbäck, Djerf-Pierre, & Shehata, 2012; Strömbäck, & Shehata, 2010). In this study, the dynamic among interest in game issues, political interest, and media use is intriguing. In Chapter 2, I argued that game issues were not limited to gaming per se, rather they involve sociopolitical implications that include political conflicts or power struggles among government actors and interest groups. Though I do not argue that political interest and game issue interest are the same concept or game issue interest is necessarily part of political interest, the two variables are closely related to each other, with a correlation of .332 ($p < .001$). Like political interest did in the previous literature, game issue interest in this study also predicts news use, and game issue interest operates as a political interest in that participants approach game issues as a political matter.

Moreover, gamers who are interested in game issues also tend to proactively seek information, and thus it seems that they use media for surveillance purposes. Regarding game regulation, RAS players, who are strongly affected by government intervention (targeted genre of game regulation), and AR players were more likely to use media; the result showed that RAS genre was positively related to all of media use. Even though game play hours is negatively correlated to newspaper use and mass media exposure, certain genres such as RAS and AR increased both newspaper exposure and media use for game news.

Unlike the effect of game play hours on news media use, game play hours is positively related to webzine and in-game media as information sources. This result suggests that those

who play games longer seek information while they play games (in-game) or while they search for game topics (webzine or game community) that is related to gameplay. Though information acquisition or exposure is relatively accidental in the case of in-game sources, it might be possible that in-game quest or webzines also play a role as surveillance media like mainstream mass media, becoming important sociopolitical information sources for gamers.

4-2. Game Co-playing and Game Dissuasion

In Chapter 4-1, I discussed interest in game issues, game play hours, and game genre as important antecedents of media use. In addition to game genre, I examine to what extent game genre and media influence on game co-playing (friends/network) and game discussion when controlling for ideologically different media exposure and exposure to game news. By analyzing a model that predicts game co-playing and game discussion, I explore inside relationships within the gamer's communicative ecology. As previously mentioned, gamer's communicative ecology consists of three layers: game playing (game genre) and media usage, game co-playing, and game discussion. In Chapter 4-2, I explore how the technological layer (game genre and media) influences both the social layer (game co-playing) and the discursive layer (discussion about game issues) in the gamer's communicative ecology.

While I do not argue that exposure to media is a requirement for playing games with friends, the inherently social nature of engaging in an in-game quest might contribute to making game friends and discussions about game issues, including game regulation or other game-related social matters. By analyzing this relationship, I seek to answer whether gamers view game issues as a political matter and media as an information source for surveillance. Moreover, how players of different game genres treat game co-playing and media are analyzed to deeply understand the role of game genre's political role (in Chapter 4-4). The unique characteristics of game genre and different purposes of media use will be further examined.

Within the gamer's communicative ecology, game co-playing (guild members or game friends) are not merely game colleagues. Interactions among guilds or other in-game social groups may foment new social ties through diverse channels of communication as well as

building and sharing the communities of collective intelligence in order to achieve common goals. Yee (2006) found that gamer interactions are closely related to the major motivation of achievement for game playing (Yee, 2006).

In operationalizing a gamer network, previous studies used the concept of weak or strong ties for gamer network structures (Shen, Monge & Williams, 2012). Concerning offline/existing guild member formulation, according to Williams, Caplan and Xiong (2007), an important dimension of positive patterns between online and offline relationships is geography. Players who live in geographical proximity can develop stronger connections than those who live further away. Several studies support this idea, as preexisting offline relations migrate into online; thus, offline relations still influence the online world (Huang et al., 2013). However, instead of dividing online to offline relationships or game networks to general social networks, I combined both online and offline (existing relationships) social networks into game co-playing to measure diversity of network and view game friends and guild membership as a collective whole to explore broader concepts of gamer social networks and game-specific networks. Moreover, by following Yee's (2006) notion of new social ties via interaction among gamer networks, I seek to explore how existing gamer social networks contribute to trust in gamers, sense of belonging, and building communities of collective intelligence later in the chapter.

Game discussion

In the exploration of the role of game discussion on facilitating participatory behavior, I treat political talk (game discussion in this study) as an antecedent of participation, though some research has regarded political talk as per se political participation (Bakker & de Vreese, 2011; Kenski & Stroud, 2006). While I regard game regulation as a political subject matter and

operationalized discussion about game issues as *talk/discussion*, the term game discussion needs to be clarified, considering the notion of conversation vs. talk (Schudson, 1997).

It is possible that the survey respondents perceive game discussion primarily as a leisure related topic instead of political subject matter. Moreover, the social setting of game discussion tends to be informal. Although game discussion does take place in certain formal deliberation settings ranging from Parliamentary debates to structured forums within the gaming community, conversations about game issues are mostly spontaneous occurrences within game play, and casual conversation on game issues might transit to more serious social issues, such as game regulation and game related social problems. Accordingly, game discussion entails two conceptual issues: deliberation setting and content/topic of discussion.

While Schudson (1997) distinguished political talk from social conversation, arguing that conversation has nothing to do with deliberative democracy, Scheufele (2000) emphasized the importance of casual conversations for social connectedness under the concept of social capital. Scheufele (2000) provided an empirical finding that casual conversations on issues related to work, personal life, and leisure activities lead to political talk and political talk leads to political participation. Yet, casual conversation did not directly lead to participation. Even if I adopt Eveland and his colleagues' (2011) suggestion of informal political conversation as an extension of new deliberation, the content of discussion still remains unsolved. However, I argue that, if game discussion facilitates participatory behaviors, the role of game discussion is not limited to a social one, even if people perceive game topics as casual conversation. Thus, I will explore what role game discussion has on participation in later sections.

Research Questions and Hypotheses

RPGs, especially MMORPGs (Massively Multiplayer Online Role-Playing Games) or the AOS genre that are played online often require a group of gamers. MMORPGs, by their nature, are almost impossible to play game alone, and thus playing in this genre entails game co-playing. Moreover, RAS and SPW players not only play against or with AI (Artificial Intelligence that game developer already programmed), their co-players or opponents can be other game players. Thus, the following hypothesis is offered:

H4: RAS playing will be positively related to game co-playing.

H5: SPW playing will be positively related to game co-playing.

As opposed to the RAS genre, people who play in the AR genre, like Pokémon GO, tend to play games solitarily (solo player) or play against a player (although a multi-battle allows up to four players to play together and such friendly matches are uncommon). Thus, based on the characteristics of game genre, I offer the following hypothesis:

H6: AR playing will be negatively related to game co-playing.

As mentioned earlier, studies on the influence of media use on game co-playing is nonexistent. Thus, I offer the following research question:

RQ12: What is the relationship between media use and game co-playing?

Regarding talk/discussion, most of the previous studies on political talk on democratic citizenship have explored the area of political participation, either encouragement of participation as a result of the influences of non-like-minded others (McKuen, 1990; McLeod, Scheufele, Moy, Horowitz, et al., 1999; Scheufele et al., 2003; Scheufele et al., 2004, Rojas et al., 2011) or demise of participation (Mutz, 2002, 2006) as a result of the influences of cross-pressures and ambivalence that make politics more complicated and individuals more reluctant to

engage in political participation. Before predicting participation, I will explore how game genre and media use contribute to political discussion as an antecedent of participation later in the chapter. Due to the lack of literature on game genre and discussion, I offer the following research question:

RQ13: Will playing a specific game genre be related to discussion about game issues?

While news media tend to increase political discussion, different types of media predict discussion in different ways. Some studies found television leads to political discussion (McLeod, Scheufele & Moy, 1999; Moy, & Gastil, 2006) but print news does not. Moreover, studies that explored the role of entertainment media found out that its impacts on knowledge or political engagements differed depending on the content or type (Holbert, Kwak, & Shah, 2003; Shah, 1998; Shah, McLeod, & Yoon, 2001; Vincent, & Basil, 1997). In regard to the content of discussion topic, the effects of media use and game discussion may differ depending on general media exposure (by ideology) and media exposure to game related news. When it comes to issue specified discussion, it is unknown whether content of news or medium is what matters most, specifically whether ideologically different media exposure and exposure to game news affects game discussion in similar ways. Thus, I offer the following research question:

RQ14: What is the relationship between ideologically differing media exposure, game news exposure, and discussion about game issues?

Measurement of core concepts

Game Co-playing was combined size of game friends and guild memberships. Game friend was measured by an additive index of three items which asked respondents how many people play with: “Random encounters (in quest),” “Online friends,” and “Offline friends.” An

index was divided into four groups: “0” (41.9%), “1 to 3” (18.2%), “4 to 10” (21.4%), and “11 to 410” (19.6%). ($M = 1.16$, $S.D. = 1.16$). Guild member was measured using a single item on an average number of guild members with whom respondents play. An index was divided into four groups: “0” (60.4%), “1 to 6” (12.8%), “17 to 20” (15.2%), and “23 to 200” (12.0%). ($M = .78$, $S.D. = 1.08$). These two variables were averaged into a single index ($M = .97$, $S.D. = .97$, $r = .48$).

Game discussion was measured using a single item that asked respondents how often respondents talk or discuss the issue of game regulation on a 6-point scale, where “0” means never to “5” meaning very frequently ($M = 2.25$, $S.D. = 1.24$).

Predicting game co-playing and game discussion

A multiple hierarchical regression model was performed in order to examine whether playing specific game genres and media use predict a) game co-playing and b) discussion about game issues. For the analysis, demographic variables (gender, age, education, income, status/existence of children), game issue interest, ideology, and game play hours were included in the first block of the equation. In the second block, I entered game genre variables including RAS, AR, and SPW. In the third block, I entered general media exposure variables including conservative newspaper, liberal & moderate newspaper, and webzine. In the fourth block, I entered media exposure to game issue variables including mainstream mass media, online media, and in-game media.

The model for game co-playing explained 36.5% of the variance (Table 40). Demographic variables, game issue interest, and game play hours were important predictors (24.3% incremental variance) of game co-playing. Upon entry, gender ($\beta = -.179$, $p < .001$), age ($\beta = -.211$, $p < .001$), income ($\beta = .062$, $p < .05$), game issue interest ($\beta = .123$, $p < .001$), and

game play hours ($\beta = .311, p < .001$) were significant predictors of game co-playing. Income and game issue interest dropped to non-significant levels when game genre variables were entered the equation.

Table 40: Game Co-playing

	Block 1	Block 2	Block 3	Block 4
Block 1: Demographics & Game				
Gender (male=1)	-.179***	-.149***	-.140***	-.141***
Age	-.211***	-.146***	-.143***	-.147***
Education	.001	-.018	-.022	-.018
Income	.062*	.016	.013	.013
Children (under 20s)	-.044	-.031	-.030	-.031
Game issue Interest	.123***	.043	.010	-.023
Ideology	.001	-.005	-.003	.001
Play hours	.311***	.183***	.183***	.177***
<i>Incremental R² (%)</i>				24.3***
Block 2: Game Genre				
RAS		.335***	.304***	.275***
AR		-.029	-.048	-.074**
SPW		.106***	.103***	.093***
<i>Incremental R² (%)</i>				8.8***
Block 3: General News-ideology				
Conservative news			.010	.018
Moderate news			.010	-.002
Webzine			.117***	.051
<i>Incremental R² (%)</i>				1.1***
Block 4: Game News exposure				
Mass Media				-.015
Online Media				.028
In-game Media				.187***
<i>Incremental R² (%)</i>				1.4***
Total R ² (%)				36.5

Entries are standardized regression coefficients;

Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

This suggests that those who are male, younger, higher income, more interested in game issues, and have longer play hours were more likely to acquire game co-playing. Income and game issue interest indirectly via game genre variables affected game co-playing.

Game genre accounted for 8.8% of incremental variance. RAS ($\beta = .335, p < .001$) and SPW ($\beta = .106, p < .001$) contributed to game co-playing and remain significant when media variables were entered. AR ($\beta = -.074, p < .01$) was significant when media variables were entered. This suggests that, while RAS and SPW have direct and indirect effects on gaming co-player, AR genre indirectly influences via media usage on gaming network.

The contribution of media usage accounted for 2.5% of incremental variance, and ideologically different media use accounted for 1.1% of incremental variance. While webzine ($\beta = .117, p < .001$) was a significant indicator, the significant effect disappeared when game news exposure variables were entered. Among game news exposure, only in-game ($\beta = .187, p < .001$) was a significant factor, which suggests that in-game quest or community as game news information sources leads gamers to be more connected and ultimately build their gaming network.

The model for discussion of game issues explained 37.8% of the variance (Table 41). Demographic variables, game issue interest, and game play hours were important predictors (23.2% incremental variance) of discussion of game issues. Upon entry, gender ($\beta = .052, p < .05$), status of children ($\beta = .06, p < .05$), game issue interest ($\beta = .450, p < .001$), and game play hours ($\beta = .084, p < .01$) were significant predictors of discussion of game issues. Income and play hours dropped to non-significant levels when game genre variables were entered. This suggests that those who are female, have children under 20 years of age, are more interested in games, and play games longer are more likely to engage in discussing game issues. In addition,

gender and game issue interest, both directly and indirectly via game genre and media use, influenced game discussion.

Table 41: Discussion of game issues

	Block 1	Block 2	Block 3	Block 4
Block 1: Demographics & Game				
Gender (male=1)	.052*	.064**	.080**	.073**
Age	-.040	-.028	-.024	-.050
Education	.037	.027	.018	.024
Income	.050	.000	-.007	-.010
Children (under 20s)	.060*	.072**	.074**	.066
Game issue Interest	.450***	.353***	.297***	.262***
Ideology	.031	.008	.007	.001
Play hours	.084**	-.005	-.002	.003
<i>Incremental R² (%)</i>				23.2***
Block 2: Game Genre				
RAS		.202***	.152***	.132***
AR		.201***	.168***	.142***
SPW		-.014	-.021	-.026
<i>Incremental R² (%)</i>				9.5***
Block 3: General News-ideology				
Conservative news			.039	.014
Moderate news			.027	.006
Webzine			.178***	.119***
<i>Incremental R² (%)</i>				3.1***
Block 4: Game News exposure				
Mass Media				.115***
Online Media				-.022
In-game Media				.129***
<i>Incremental R² (%)</i>				2.6***
Total R ²				37.8

Entries are standardized regression coefficients;

Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Game genre accounted for 9.5% of incremental variance. RAS ($\beta = .202, p < .001$) and AR ($\beta = .201, p < .001$) contributed to discussing game issues and remained significant when media variables were entered. This suggests that, while the RAS and AR genres have a direct and an indirect effect via media variables on game discussion, those who play in the RAS and AR genres were more likely to be involved in game discussion.

The contribution of media usage accounted for 5.7% of incremental variance, and ideologically different media accounted for 3.1% of incremental variance. The effect of webzine ($\beta = .178, p < .001$) on discussion only appeared significant for game discussion among the ideologically differentiated media.

Among variables on game news media exposure, mainstream mass media ($\beta = .115, p < .001$) and in-game media ($\beta = .129, p < .010$) appeared as significant predictors of discussion of game issues. Results suggest that exposure to mainstream mass media is the most effective factor for gamers to engage in game discussion. As predicted, in-game platform usage was also positively related to game discussion. Implications about the influence of game genre and media use on gamers' communication practice will be addressed in the discussion.

The results offer support for hypotheses H4: RAS genre play was positively related to gaming network; H5: SPW play was positively related to gaming network; and H6: AR play was negatively related to gaming network.

Implication and interpretations

The empirical findings support the idea that game genre and media use antecede game co-playing (gaming network) and discussion about game issues. The study suggests that the differing characteristics of the RAS and AR game genres on game friends and different purposes

of media use play a critical role in explaining the opposite predicting directions of the RAS and AR genre on game co-playing.

The fact that game play hours is positively related to game co-playing suggests that longer game play hours promotes the building of a gaming social network. This is most likely because gamers have more chances to meet other gamers in the game quest who are potential future guild members.

Regarding the media, it was not a significant indicator for game co-playing. This was not an unexpected result as mass media exposure or newspaper reading is not necessary for playing games with friends. The finding that only in-game quest was significantly related to game co-playing suggests that the information channel of game quest or online community serves as a communication sphere where information is expressed and shared to strengthen gamer networks. However, to discuss game issues, including game regulation or other game-related social matter, game related media (webzine and in-game channel) and media exposure via mass media were important. An interesting finding is that mainstream newspaper exposure was not a significant indicator of game discussion. Regardless of the ideological tendency of news media, the relatedness of news contents was what mattered to specified issue discussion.

Based on the results, media content is meaningful for game discussion. Since mass media exposure was operationalized by combining newspaper, television, and radio, the content of game topics was related to the practice of talking about game issues. As stated previously, it is plausible that gamers regard game issues as a social matter for discussion and view media as an important information source for surveillance. I believe that this thinking on game issues and perception of media ultimately leads gamers to engage in discussion about game issues. Moreover, it is important to examine the underlying dynamics within game genre, media use,

game co-playing, and game discussion since such dynamics provide insight into why the RAS and AR genres predict game discussion similarly yet predict game co-playing differently.

As hypothesized, the result suggests opposite directions of the two game genres on game co-playing. The finding suggests that those who play RAS tend to play games with either friends (including online and offline) or guild members; RAS players were more likely to play with an existing social network or build in-game networks, such as guilds. Moreover, since players of RAS and SPW play with their co-players, for them co-players are an important element of game enjoyment. This genre characteristic explains the positive relationship between SPW and game co-playing.

The study result shows that AR genre is negatively related to game co-playing, which is an expected result as AR games are generally structured to be played alone. However, this does not necessarily mean that AR players are isolated, since they communicate with other people via in-game activity and also discuss game issues with others. While AR players do not need other people when they engage in game play (e.g. catching Pokémon), they need sources of information for game playing.

Media and social networks are two important sources of information, and people seek or share information via media or human communication (regardless of whether it is digitally mediated or not). In the Chapter 4-1, I discussed the relationship between game genre and media use as well as further argued that certain game genres fostered surveillance media use, e.g. the AR genre was positively related to media use including newspaper and in-game quest as information exposure. Based on the results and characteristics of the AR genre, it can be interpreted that, if media satisfy AR players' needs (either information seeking/sharing for game topics or game regulation topics), they will not look for this via social networking with existing

friends or game colleague. What AR players really need is information, for instance, where Pokémon are located and what skills players are required to have. Discussion with others may occur based on this purpose. Thus, AR players tend to use media to seek or share information, and this also forms the basis of their discussions, explaining why AR was positively related to game discussion. This behavior based on the characteristics of game genre can be further related to discussions about game regulation or other game related social issues for surveillance proposes.

4-3. Game Community & Learning: Involvement, Belonging, Gamer self-identification and Trust

New media technology and online community

In Chapter 4-2, I discussed the relationships among game genre, media use, game co-playing, and game discussion under the model of gamer's communicative ecology. In Chapter 4-3, I expand the role of gamer's communicative ecology on game community activities, perceived identity of gamers, trust in gamer, perceived game learning, and political knowledge. To conceptualize these variables, I apply the concept of a) social capital on game community involvement and sense of belonging, b) emotion in the cultural model of social movement on perceived identity of gamers, and c) games as social learning environments on perceived game learning.

Assuming that community activities and game learning play critical roles in the participatory behavior of gamers as well as mediate between gamers' communicative ecology and participation, I highlight the role of a) game genre's unique characteristics on psychological aspects of community, perceived identity, and perceived learning; b) media, especially game related information sources, such as webzine or in-game quest on gamer activities and mainstream media on trust in gamer; and c) discussion about game issues on collective sense of identity (Walsh, 2004) and perceived learning effects (Eveland, 2004). In addition, I expand the role of political knowledge on gamers participation model. Namely, I explore whether the actual knowledge positively associates with game related media use and game discussion to potentially increase participation, like suggested by the political communication studies that media use and political talk positively predict political knowledge, and such knowledge also encourages

participation. I believe that these analyses on various gamer activities suggest new aspects on games regarding the negative notion of game violence or addiction.

Previously, I argued that gamer online communities may serve as a source of information, a place of deliberation, and a site of diversification. The community functions as the public sphere where politically indifferent gamers are exposed to social discussion and a potentially important realm for mobilization. As a theoretical basis for gamer community, I will briefly explain important aspects of the theory of new media and online community and what issues scholars have addressed (Bimber, 2003; Benkler, 2006, Wellman, 2001; Rainie & Wellman, 2012). As a theoretical foundation, literature on new media's democratic potential contributes to an understanding of those in the online game community.

4-3-1. New media and online community

Similar to the impact of technology on democracy, scholars have divided themselves into early utopian-virtual community (Jones, 1998), dystopian-dysfunctional community (Kraut et al., 1998; Putnam, 2000; Nie & Erbring, 2000; Sunstein, 2001) or reinvention of new online community (Benkler, 2006; Mossberger et al., 2008; Rainie & Wellman, 2012). In the book *Bowling Alone*, Putnam (2000) analyzes the important phenomenon related to the perspective held by pessimists regarding community between the middle and the late 20th century: lower civic engagement, decline of social capital, and community collapse. Since the 1960s, voter turnout, grassroots political activism and traditional civic organizations have diminished such that people have become more isolated, detaching from civic life and social networks. Putnam argued that heavy television watching was the main cause for declining participation in civic life;

television not only steals time (*time displacement* hypothesis) but generates passivity, and people are thus less likely to engage in interpersonal contact and community involvement.

Regarding the negative impact of the Internet on community, early research supports the idea that people tend to become depressed and lonely as they involve in the new medium (Kraut et al., 1998; Nie & Erbring, 2000). At the same time, the Internet limited the scope of information and discussions to those who share similar views (Sunstein, 2001), reducing exposure to and tolerance of the ideas of others, such as Putnam's (2000) cyberbalkanization. Due to the ubiquity of information and the absence of the mass media as condensation points, Sunstein (2002) argued that public discourse would be impoverished by fragmentation of personalization. Meanwhile, Sunstein (2002) also argued that groups of like-minded participants, who only share similar information and opinions, tend to reinforce their own and existing views/beliefs and do not engage in alternative views or critiques, consequently leading to polarization. Therefore, the Internet in general and online discourse or communication in particular fails to provide common ground for political discussion.

These negative views, however, may misrepresent the current impact of the Internet on political, communal, and civic life as "data collected immediately after the initial explosion of Internet usage during the late 1990s" (Mossberger, Tolbert & McNeal, 2008, p. 51) may not be as relevant and the decline in traditional civic organizations is "largely be an assessment of the state of bureaucratic civic associations" (Bimber, 2003, p.125). Because of this, scholars may overlook the value of newly emerging online communities (post bureaucratic civic associations), where social capital and community life are substituted or reinvented.

Alternately, the time displacement hypothesis may ignore the differences between traditional mass media and new media (Williams, 2006a). Benkler (2006) demonstrates the

effects of network technology on democratic potentials; he argued that an alternative platform for the public sphere has emerged, due to the democratizing effects of the Internet and networked information economy. The networked information economy allows people to gain more freedom, be more connected to each other, and ultimately create a culture of reasoned discourse by sharing diverse opinions. Because the Internet greatly mitigates the hegemony of mass media organizations, the networked public sphere provides individuals with greater opportunities to express opinions and increase their engagement in public discourse, potentially disrupting the power of the mass media. A study by Rainie & Wellman (2012) also shows that networked individuals living in a networked society who connect with each other in a system of “loosely knit, overlapping, flat connections” (p. 376) are well-adjusted socially but in new ways that are different from traditional physical/geographical connections. This notion of a new framework also reflected what Wellman (2001) argued about the online community, stating that triple revolutions (the social network, Internet, and mobile revolutions) offer new ways of social connection and provide deeper contexts for forging new relationships within a community that emphasizes altruism and tolerance (Rainie & Wellman, 2012).

Based on the effects of network technology on democratic potentials, I assume that games also offer what networked information economy provides, including more freedom, connection, and reasoned discourse, and an alternative platform for the public sphere (networked public) while gamers engage in online community. Gamer online communities allow gamers to have more opportunities for expression and sharing information (as a source of information) in a space where diverse opinions are valued (as a place of diversification), which may lead to engage in public discourse (as a place of deliberation).

4-3-2. Game community: involvement, and sense of belonging

As discussed, I believe that games and game communities offer democratic potential as new media studies have suggested. In this section, I emphasize the role of (gaming) social capital, perceived identity construction, psychological attachment to game communities, and games as environments of cognitive/participatory learning communities, especially exploring the relationships between these variables and participation. This study builds concepts based on existing literature by assuming that the previous literature on social capital, social movement theories (especially cultural/emotional aspects), and game learning provides insight into this concept in the new media environment and attribution of participation.

I first introduce a conceptualization of community activities (gaming social capital) based on the literature of social capital. Next, I examine what aspects scholars in communication studies discussed about social capital and what roles social capital plays in social action. Second, I analyze unique contributions of games and gamer interactions on various gamer community activities that later play key roles in gamer participatory behaviors. To do this, I explore what role variables in gamer's communicative ecology contribute to game community, gamer collective identity, and trust in gamer.

Regarding the operationalization of gaming social capital, while a recent study (Molyneux, Vasudevan & Gil de Zúñiga, 2015) constructed this concept by combining “social connectedness attitudes among gamers” and “behavioral forms of communication that maintain these connections” (p. 388). Instead of viewing social capital monolithically, this study separates it into two concepts that emphasize different aspects of gamer communities: behavioral forms of communication as gamer community involvement and psychological attachment to community

as a sense of belonging to community. Moreover, I expand the breadth of gaming social capital with the concept of communicative social capital (Rojas et al., 2011).

According to Rojas and his colleagues (2001), discussion networks and mass media are important nodes for integrated communication system. Although they underline the role of “associational membership as structural component of social capital” (p. 693), the concept of communicative social capital within a game community provides new insight in analyzing community involvement and sense of belonging as a communication structure based in communal and personal linkages (Rojas et al., 2011). Rojas et al. (2011) argued that defining social capital as mere connections among/between people and institutions overlooks the importance of communication, and the study credits Coleman’s (1990) conceptualization of social capital as the “information that inheres in social relations,” connecting social ties with modes of communication (Rojas et al., 2011, p.690). Rather than selecting either an individual or societal perspective, Rojas et al. (2011) examined social capital “from an individual perspective as a linkage between actors and between individuals and institutions” (p. 691).

Scholars have further argued that individual networks fail to account for institutional structures that are significant to community life (Knoke, 1990; Wellman, 1999), and associational membership play a critical role to understanding “individual connection to the structural component of social capital” (Rojas et al., 2011, p. 692-693). Moreover, according to the authors (Rojas et al., 2011), resources of communication (information flows in media) on discussion networks also play an important role in this dynamic; nodes “not only refer to people but also to social organizations” in the network structure (p. 707). This notion provides new insight into *connection centered* social capital and underscores the importance of online game community as community life (alternative to associational membership) as well as game co-

playing (especially guild membership) as a key element of social capital and media as institutional structures.

The strong relationship between social capital and participation has led researchers to the idea that social capital is closely related to participation. Scholars expand the notion of social capital into newly emerging social fields. Beginning with the so-called “sociotechnical capital” in technology-mediated social relations (Resnick, 2001), the changing media environment, particularly the emergence of SNSs, lead to new social phenomenon that affects the way people communicate and participate in social life. In game studies, scholars found that social life (guild or game organization) can foster social capital (expanding social relationships, e.g. Steinkuehler & Williams, 2006). Social capital, in turn, facilitates communication about civic issues (forum for discussion about social issues) to foster more effective collective action related to public matters (Kahne et al., 2008). This happens because digital citizenship encourages social inclusion and the Internet stimulates community/civic engagement by generating political discussion and increased knowledge (generating informed citizens). Their results highlight how political attitudes and beliefs develop from conversations/discussion in online forums, leading to political behavior.

In game communities, people may share ideas and beliefs on various issues, including social and political issues. In terms of political information exposure in online forums/groups, Wojcieszak and Mutz (2009) discovered that online leisure or hobby groups (e.g. sports, trivia, movies or TV shows, crafts, or collectibles) brought together people who shared something other than political views but who nonetheless exchanged opinions on controversial public issues. However, they cannot attest to the quality of conversations and whether this incidental political talk in nonpolitical online spaces substantiates true deliberative potential or rather suggests that

either “individual characteristics (such as partisanship or its strength) or characteristics of the online group itself” may cause the difference (Wojcieszak and Mutz, 2009, p. 47).

I propose that by building community, gamers create a discussion realm/space (either for game problem or social issues) where instant and prolonged communication occurs. In the forum, subjects of discussions are about not only game contents but also surrounding social issues on games. As previous research suggested (Gamson, 1992), information sharing and expression among members may lead to further action, possibly online social action, such as signing a petition or writing an email to relevant regulatory agencies.

While the result of Kahne and his colleagues (2008) suggested that social capital antecedes communication, this study explores the predictive role of gamer’s communicative ecology on gaming social capital (community involvement and sense of belonging). The logic of this argument is that not only gamers’ social life (in Kahne and his colleagues’ term) or game co-playing and discussion foster both behavioral forms of community and psychological attachment to community, but the media is also an important contributor of social capital.

4-3-3. Sense of belonging, and gamers’ identity- role of emotion

As a theoretical basis for identity construction and psychological attachment to gamer communities, social movement theory fosters understanding of the importance of emotional/cultural aspects in the gamer participation model. I will explain how gamer psychological attachment and self-identification as a gamer is differed and what analytical tool can be applied to construct such concepts. Moreover, the connotations of being a gamer (self-identification) will be discussed in regard to game regulation, media’s biased representation, and government views on a specific game genre.

Following Olson (1965), rational choice theory and the rational actor paradigm have had a strong influence on subsequent social movement models, such as the resource mobilization and political process models (Melucci, 1989; Jenkins, 1983; McCarthy & Zald, 1977). The logic behind this development imposes conflicts over the dominant paradigm of rationality over emotion, instrumental politics over identity politics, and social construction of contentious politics over movement framing (see Tarrow, 2011). Another tradition of social movements highlighted cultural aspects that the previous rationalists overlooked. Hirsch (1990) argued that the rational choice is “less adequate in accounting for recruitment and commitment” (p. 243), since it assumes isolated individual selection. According to Gould (2004), once political process theorists acknowledge the emotional components, they face the difficulty of explaining contradicting evidence that “constricting political opportunities generate emotions that facilitate protest and the emergence of movements” (e.g. ACT UP; Gould, 2004, p.164). Therefore, as opposed to the rationalist tradition, the “cultural turn” in social science has brought “framing, identity construction, and emotions to the center of attention” (Tarrow, 2011, p.155). McAdam (2010) also critiqued rationalist notions of structural opportunity, arguing that “shared understandings and conceptions of we-ness” (culturally constructed) rather than structural changes play a significant role in the mobilizing process (p. 206).

Moreover, the new generation of scholars treated “rational protestors as devoid of emotions,” (p. 5) criticizing the characterization of protestors as “exceptionally cognitive and unusually dispassionate” that provides no insight into “why such dispassionate people would ever be motivated to disrupt their daily routines” (p. 161) and mobilize at the expense of rational cost calculation (Goodwin, Jasper & Polletta, 2009). Thus, emotions are “integral to a person’s sense of herself and to her political subjectivity” and shape people’s notions of “what is

politically possible and desirable” (Gould, 2004, p. 162). Hochschild (1990) further elucidates that “communities or social groups have emotion cultures” that demarcate the mode of participation “to codify, appraise, manage, and express feelings” (p. 124). According to Polletta and Jasper (2001), collective identity has been incorporated into analyses of grievance constructions and framing processes (Hunt, et al., 1994), motivations for participation (Goodwin & Pfaff, 2001), activists’ tactical choices (Grove, 2011), life-course outcomes (McAdam 1988), and emotions (Goodwin, et al., 2001). At the most basic level, collective identity is defined by a shared sense of “we-ness” (Hunt & Benford, 2004). In collective identity construction, Taylor and Whittier (1992) suggested three analytical tools: boundaries (social, psychological, and physical structural difference; in-group vs. out-group), conscientiousness (“the interpretive frameworks that emerge out of a challenging group’s struggle to define and realize its interests”), and negotiation (p. 353). Moreover, Zomeren and his colleges (2008) argue that in many measures of group identification the cognitive centrality of group membership (J. C. Turner et al., 1987) and affective ties or sense of psychological attachment are closely related facets of social identification. According to Zomeren and his colleagues (2008), affective commitment measures with the item of “I identify with/feel connected to/ feel strong ties with [group X]” and/or items built on self-categorization: “I see myself as/define myself as a member of [group X] (p. 513).”

Taylor and Whittier’s (1992) concept of boundaries is related to Zomeren and his colleges’ (2008) concept of psychological attachment in group identification. For gamers, however, I separated gamer identity (*gamer self-identification*) and gamer sense of belonging from gamer communities. Gamer sense of belonging is related to the boundaries aspect of identity, which is closed to the affective ties to other gamers or community/group. Although

emotional attachment is important in constructing gamer self-identifications, conscientiousness may be a key analytical tool as gamers' self-identification as *gamer* might be founded in the desire to co-opt negative perception of games (violence or addiction) or gamers (violent or addictive), especially in the participatory mechanism. Thus, self-identification as gamer implies not only those who play games for a certain amount of time (mostly measurement of frequency) in a specific time period but also those who may conscientiously act upon particular governmental policy and mobilize to take part in participatory behavior.

For Korean gamers, perceiving themselves as gamers goes far beyond the notion of enthusiasm. The result of content analysis indicated that media description toward games was negatively slanted. The news reported games as violent and addictive substances that cause numerous social problems, and those who play games were stigmatized as aggressive, addicted, and socially isolated. In particular, the Korean government blames games in the RAS genre for violence and addiction. Based on this context, I examine the relationship between playing certain game genres and self-identification as a gamer. As mentioned, the RAS genre is the target of game regulation. Under these circumstances, I assume that players of the RAS genre feel more closely connected to their gamer communities and are more likely to identify as gamers.

H7: RAS genre playing will be positively related to community belonging.

H8: RAS genre playing will be positively related to gamer self-identification.

I argue that game co-playing will be positively related to psychological attachment to community and self-identification as a gamer. Adopting Walsh's (2004) notion of political identity formation by talking politics, I argue that game discussion (talking games) helps gamers to form their self-identity (gamer's perceived identity).

H9: Game Co-playing will be positively related to community belonging.

H10: Game Co-playing will be positively related to gamer self-identification.

H11: Discussion about game issues will be positively related to gamer self-identification.

4-3-4. Trust in gamers

Shen, Monge and Williams (2012) explored the network structure of MMOGs, stating that players' network brokerage positively predicted trust among closed guild-mates. However, they found that it was not certain whether "network closure facilitates trust" or "trusting relationship lead to mutual friendships" (Shen et al., 2012, p. 476). According to Ratan et al. (2010) whether trusting relationships were built by playing games or "as an extension of existing offline social relationships" is unknown (p. 108).

While Shen and his colleagues (2011) analyze the preceding relationship between trust and game networks (Shen et al., 2012), this study focuses on the role of gamer's communicative ecology, especially game co-playing and trust as mobilizing resources regardless of which comes first. Regarding game genre and trust in gamers, I propose that gamers build trust while they play games across all genres (RAS, AR, and SPW) and offer the following hypotheses:

H12: All game genres will be positively related to trust in gamers.

Based on the results of content analysis that mass media described game and gamers negatively, especially in relation to responsibility for social problems, and the impact of media on public perception, I argue that the (negatively) biased representation of games and gamers in news media may also impact trust in gamers. Thus, the following hypotheses are tested:

H13: Conservative newspaper will be negatively related to trust in gamers.

H14: Webzine will be positively related to trust in gamers.

H15: Exposure to mainstream mass media (TV, radio, newspaper) will be negatively related to trust in gamers.

H16: Exposure via in-game source (game quest/community) will be positively related to trust in gamers.

I propose that gamer communication and gamer network promote trust in gamers.

H17: Game Co-playing will be positively related to trust in gamers.

H18: Discussion about game issues will be positively related to trust in gamers.

In sum, before exploring the role of game community, gamer self-identification, and trust as important antecedents for participatory behavior, I explore the following questions:

RQ15: How do existing gaming networks contribute to community involvement, building sense of belonging, trust in gamers, and gamer self-identification? In other words, as antecedents of community involvement, sense of belonging, trust in gamers, and gamer self-identification, do different game genres predict the above variables in the same way?

RQ16: What is the relationship between media use and game community, trust, and gamer self-identification?

RQ17: Does game co-playing and discussion about game issues antecede community involvement and a sense of belonging?

4-3-5. Perceived knowledge and actual knowledge: perceived game learning and political knowledge

Based on the learning role of games, I will address to what extent games as a learning environment and participation in games can be considered a new way of socialization and social

learning. As a theoretical basis, I apply the notion of gamification on (perceived) game learning as extensively discussed in pedagogical studies that are related to game playing (Gaydos & Squire, 2012; Gee, 2003; Gee & Hayes, 2012; Shapiro & Squire, 2011; Squire, 2006; Squire, 2011; Steinkuehler, Squire, & Barab, 2012). In analyzing games' educational role and how games enhance socialization, I assume the following logics of gamer participation. It may be possible that gamers who play certain genres, (e.g. RAS, a target of regulation) are more likely to be interested in game regulatory issues and discuss the issues with others via diverse channels, participate in public discourse, and ultimately participate in civic or political activities more than other game players.

In this regard, the importance of interest in game issues, game genre, channel of communication, gamer network, and game discussion should be examined to understand the social roles of games and games as a place for learning before analyzing the role of game learning on participatory behavior. More specifically, the unique characteristics of certain game genres, gamers' roles in game dynamics, and game related information channels will be underlined. Moreover, the learning impact of games on actual knowledge will be discussed. If games are the new platform for the learning, do activities in games also increase actual political knowledge? Based on the same variables that predict perceived game learning, I offer the following research question:

RQ18: In a broad sense, what are the predictors of political knowledge? Is there a relationship between game related variables and political knowledge?

Among various new media platforms, games have been examined as new sociopolitical environments (Benkler, 2006; Jenkins 2006; Martin & Steinkuehler, 2010) that may integrate social experiences. Steinkuehler (2006) claimed that MMOGs provided naturally occurring

learning environments of cognitive/participatory learning communities, which were associated with “reciprocal forms of teaching and learning that occur in all directions throughout the social network” (p. 43), and further she argued that “MMOGs are social simulations” (p. 44). The premise of this notion of social simulations is that MMOGs promote social places that build relationships among individuals and groups. Such a connection ultimately mirrors the real-life context: Compare Steinkuehler’s (2005) argument of MMOGs as the new third place against Oldenburg (1998)’s decline of third places; Williams’ (2006b) approach that MMOGs are a place for bonding/bridging social capital opposes Putman’s bowling alone discourse. This diversity provides new insights for the current game study and gamer participatory behaviors. Moreover, MMOGs are spaces where “socially constructed worlds of meaning are collaboratively achieved” (Steinkuehler, 2008, p. 614). While playing online games and sharing social context, gamers have opportunities to learn how to socialize with other gamers and build community for organizations.

In game and learning environments, literature on game learning (gamification) provides ample evidences of the learning effects of game playing. In MMORPGs and digital learning curriculums, participating in game activities creates a unique culture where members rely on each other to complete different tasks. As a social consequence of game playing, as Squire (2010) suggested, “prolonged participation in game cultures may lead to a more active, problem-solving orientation to learning” (Squire, 2010, p. 2572) and increased confidence in one’s abilities that fosters feelings of concern and catalyzes a collaborative decision-making, as explored in Beck and Wade (2004). Moreover, the involvement of younger individuals into this discussion will help form future productive and acknowledged generations ready to resolve

various real-world problems and issues affecting not only political but also social or communal life.

For instance, Kahne, Lee and Feezell (2013) found that youth online participatory activities, which are politically or interest/friendship driven, are increasing in the community and promoted understanding of norms of membership and potentially collective activities. In addition, Douglas and Brown (2011) stated that “gam[ing] does not just teach programming; it cultivates citizenship” (p. 22). They examined the collective nature of the game environment: a collection of people, skills, and talents that produces a result greater than the sum of its parts. This collectivity is defined by an active engagement with the process of learning or design to learn by mutual learning.

In the collective environment, gamers see each other as resources and learn from one another: peer-to-peer learning by members with equal position within the community. For instance, by playing MMOGs, gamers are able to learn about political systems, citizenship, and real-life relationships (Williams et al., 2006; Martin, & Steinkuehler, 2010). Williams and his colleagues (2006b) analyzed guilds in *World of Warcraft* and found out that “as guild size increased, guilds were also more likely to engage in more formal management and organizational practices” (p. 13). It is notable that such management reflects real life structures and organizations, such as political systems, hierarchies, and power structures. Due to these more complex and formal structures, gamers have higher opportunities for socialization while interacting with other gamers. Based on the notion of learning effects of games, I offer the following research question and hypotheses regarding what factors contribute to perceived game learning.

H19: RAS genre playing will be positively related to perceived learning by playing games.

H20: AR playing will be positively related to perceived learning.

RQ19: What is the relationship between media use and perceived learning?

H21: Game Co-playing will be positively related to perceived learning.

H22: Discussion about game issues will be positively related to perceived learning.

Measurement of core concepts

Game community and learning: Game community involvement consisted of two items measuring how often respondents had engaged in the following activities: “I frequently write posts online about the games I play,” and “I frequently read or visit websites and forums related to the games I play”. The measurement was made up of binary indicators (1 for yes, 0 for no) and an index was created by averaging scores across two measures ($M = .12$, $S.D. = .27$, $r = .40$).

Game community sense of belonging consisted of three items measuring how often respondents had engaged in the following activities: “I feel close to the game community,” “I feel close to the people I play games with,” and “I have offline relationships with the people I game with.” The measurement was made up of binary indicators (1 for yes, 0 for no) and an index was created by averaging scores across two measures ($M = .24$, $S.D. = .35$, Cronbach’s $\alpha = .74$).

Gamer self-identification was measured using a single item that asked respondents whether the term “gamer” (fan of gaming or a frequent game-player) describes them well or not. The measurement was made up of binary indicators (1 for yes, 0 for no) ($M = .20$, $S.D. = .40$).

Trust in gamers was measured with two items: “How much do respondents think the

guild members are trustworthy?” and “How much do respondents think other gamers are trustworthy?” on an 11-point scale from 0 (least likely) to 10 (most likely). An index of *trust in gamers* was created by averaging scores across measures ($M = 4.35$, $S.D. = 2.06$, $r = .75$).

Perceived sociopolitical learning by playing game was measured by asking respondents whether they agreed or disagreed with the following two statements: “Through games, I have a chance to learn about socio-political system/structure,” and “Through games, I come to know a new world that I have not noticed before.” A 6-point scale was used for each item from 0 (totally disagree) to 5 (totally agree). An index of sociopolitical learning by playing game was created by averaging scores across measures ($M = 1.43$, $S.D. = 1.33$, $r = .65$).

Political knowledge was measured with five items that asked whether respondents know the following information: name of current prime minister, ruling party, and minister of justice; number of judges in the Supreme Court (including the Chief Justice); and maximum ratio of population on a large electoral district to a smaller district. An index of political knowledge was created by averaging scores across measures ($M = .46$, $S.D. = .22$, Cronbach's $\alpha = .32^1$). In measuring political knowledge, I limit 45 seconds to answer the questions. I treat all answers past the 45 second time limit as wrong.

¹ Unlike the higher score of alpha in other countries - for example, the United States -, the lower level of the score is expected in Korea. The prime minister and judges in the Supreme Court are rarely at the center of political discussion or issues in Korea. Their appearance in press are relatively very low compared to the ruling party leaders. In addition, until recently when the amendment of election laws and rules is discussed, the ratio was rarely known to Korean. Thus, the Cronbach's alpha of political knowledge question is not high. In fact, our test of the questionnaire has supported that it measures diverse dimensions of political knowledge rather a coherent set of the knowledge. Nonetheless, I have tested the difference of predicting pattern. I entered a one-item each time in the model, instead of using a combined index. The predicting pattern of the regression results was not significantly different.

Predicting game-community activities and learning

To predict a) game community involvement, b) sense of community belonging, d) trust in gamers, e) perceived learning by playing games, and f) political knowledge, I performed a multiple hierarchical regression by organizing the independent variables into five blocks: demographics, game issue interest, ideology, and game play hours as the first block; game genre as the second block; ideologically differing media exposure as the third block; game news exposure as the fourth block; and game co-playing and discussion about game issues as the fifth block. Moreover, I performed a logistic regression model predicting binary c) gamer self-identification.

The model for game community involvement explained 25.3% of the variance (Table 42). Demographic variables, game issue interest, and game play hours were important predictors (13.4% incremental variance) of game community involvement. Upon entry, age ($\beta = -.071, p < .05$), game issue interest ($\beta = .201, p < .001$), and game play hours ($\beta = .214, p < .001$) appeared as significant predictors of game community involvement. Age and interest in game issues drop to non-significant levels in the final block. This suggests that those who are younger, interested in game issues, and higher hour game player were more likely to engage in gamer communities.

Game genre accounted for 6.1% of incremental variance. RAS ($\beta = .131, p < .001$) and AR genres ($\beta = .183, p < .001$) contributed to game community involvement and remain significant when media variables were entered. This finding suggests that the RAS and AR genres have a direct and an indirect effect via exposure to ideologically different media variables on game community involvement; those who play RAS and AR genre games were more likely to participate in gaming communities. Yet, RAS drops to a non-significant level when game news

exposure was entered in the equation. The effect of RAS was mediated via in-game activity to foster game community involvement.

Table 42: Community- Involvement

	Block 1	Block 2	Block 3	Block 4	Block 5
Block 1: Demographics & Game					
Gender (male=1)	-.038	-.037	-.021	-.018	-.008
Age	-.071*	-.068*	-.057*	-.058*	-.036
Education	.023	.015	.010	.017	.017
Income	.024	-.015	-.016	-.016	-.017
Children (under 20s)	-.012	-.005	-.005	-.006	-.009
Game issue Interest	.201***	.125***	.067*	.040	.020
Ideology	.008	-.011	-.001	.001	.001
Play hours	.214***	.148***	.143***	.135***	.114***
<i>Incremental R² (%)</i>					11.2***
Block 2: Game Genre					
RAS		.131***	.073*	.046	.003
AR		.183***	.151***	.122***	.118***
SPW		-.003	-.007	-.015	-.023
<i>Incremental R² (%)</i>					6.1***
Block 3: General News-ideology					
Conservative news			-.016	-.003	-.007
Moderate news			.005	-.005	-.005
Webzine			.241***	.174***	.158***
<i>Incremental R² (%)</i>					4.3***
Block 4: Game News exposure					
Mass Media				-.024	-.032
Online Media				-.020	-.021
In-game Media				.207***	.174***
<i>Incremental R² (%)</i>					2.3***
Block 5: Game network/discussion					
Game Co-playing					.115***
Discussion of game issue					.086**
<i>Incremental R² (%)</i>					1.4***
Total R ² (%)					25.3

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

The contribution of media usage accounted for 6.6% of incremental variance. Webzine ($\beta = .241, p < .001$) and in-game media ($\beta = 4.3, p < .001$) appeared as significant indicators for game community involvement. This result indicates that only game related media encouraged people to get involved in gamer communities.

Game Co-playing and discussion accounted for 1.4% of incremental variance. Both variables ($\beta = .115, p < .001$; $\beta = .086, p < .01$) were positively related to game community involvement. Those who have a large number of game colleagues and discuss game issues often were more likely to be involved in gamer communities to share (write a post) or seek (read a post) information.

The model for sense of game community belonging explained 33.7% of the variance (Table 43). Demographic variables, game issue interest, and game play hours were important predictors (15.2% incremental variance) of sense of community belonging. Upon entry, gender ($\beta = -.056, p < .05$), age ($\beta = -.066, p < .05$), game issue interest ($\beta = .209, p < .001$), and game play hours ($\beta = .272, p < .001$) were significant predictors of sense of community belonging.

While demographics variables dropped to non-significant levels when other independent variables were entered in the model, game issue interest and game play hours remained significant. This suggests that those who are male and younger, more interested in game issues, and play games longer were more likely to feel a sense of game community belonging.

Game genre accounted for 4.9% of incremental variance. RAS ($\beta = .163, p < .001$) and AR ($\beta = .112, p < .001$) contributed to sense of game community belonging and remain significant when media variables were entered, yet RAS dropped to non-significant when game co-playing/discussion variables were introduced.

Table 43: Community- Belonging

	Block 1	Block 2	Block 3	Block 4	Block 5
Block 1: Demographics & Game					
Gender (male=1)	-.056*	-.052*	-.039	-.040	.007
Age	-.066*	-.048	-.040	-.044	.010
Education	.003	-.008	-.014	-.009	-.004
Income	.037	-.001	-.002	-.003	-.007
Children (under 20s)	.024	.031	.030	.029	.037
Game issue Interest	.209***	.141***	.094**	.058*	.053*
Ideology	.003	-.010	.002	.007	.006
Play hours	.272***	.195***	.194***	.187***	.124***
<i>Incremental R² (%)</i>					15.2***
Block 2: Game Genre					
RAS		.163***	.117***	.086*	-.018
AR		.112***	.086**	0.057 [#]	.076**
SPW		.042	.037	.026	-.006
<i>Incremental R² (%)</i>					4.9
Block 3: General News-ideology					
Conservative news			-.018	-.009	-.016
Moderate news			.028	.015	.016
Webzine			.181***	.107**	.084**
<i>Incremental R² (%)</i>					2.6***
Block 4: Game News exposure					
Mass Media				-.018	-.019
Online Media				.024	.015
In-game Media				.211***	.138***
<i>Incremental R² (%)</i>					2.9***
Block 5: Game network/discussion					
Game Co-playing					.354***
Discussion of game issue					.047 [#]
<i>Incremental R² (%)</i>					8.1***
Total R ² (%)					33.7

Entries are standardized regression coefficients; Significance: [#]p < .1, *p < .05, ** p < .01, *** p < .001; N = 1362

This suggests that, while the AR genre has a direct and an indirect effect in predicting sense of game community belonging, the effect of RAS was mediated via game co-playing/discussion.

Thus, those who play games in the RAS and AR genres were more likely to feel close to their community and other members.

Contribution of media usage accounted for 5.5% of incremental variance. Like the case of predicting game community involvement, both webzine ($\beta = .181, p < .001$) and in-game media ($\beta = .211, p < .001$) were significant indicators for game community belonging. This result indicates that only game related media encouraged psychological attachment for gamers.

Game Co-playing and discussion accounted for 8.1% of incremental variance. Both variables ($\beta = .354, p < .001$; $\beta = .047, p = .095$) were positively related to game community belonging. Those who have a large number of game colleagues and discuss game issues were more likely to feel close to their community. Compared to the case of predicting game community involvement, game co-playing has a much stronger effect on sense of game community belonging than the effect of game discussion.

A logistic regression analysis was conducted to predict gamer self-identification (Table 44). A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between acceptors and decliners of the offer ($\text{Chi}^2 = 184.997, p < .001$ with $df = 19$). Nagelkerke R^2 of .192 indicated a relationship between prediction and grouping. Prediction success overall was 78.6%. The result demonstrated that game issue interest, RAS, webzine, game co-playing, and discussion were significant indicators of gamer self-identification. After controlling other variables, those who are interested in game issues (11.2%), play RAS genre (12.6%), read webzine (11.9%), have large number of game colleagues (12.9%), and discuss game issues (11.6%) were more likely to perceive themselves as a group of gamers.

Table 44: Gamer Self-identification

	B (coefficient)	Odds Ratio	S.E.
Constant	-2.215***	1.09***	(.693)
Demographics & Game			
Gender (male=1)	-.107	-.898	(.155)
Age	-.009	-.991	(.008)
Education	-.045	-.956	(.125)
Income	-.058	-.944	(.060)
Children (under 20s)	-.082	-.922	(.162)
Game issue Interest	.117**	1.124**	(.038)
Ideology	.018	-1.019	(.037)
Play hours	.033	-1.033	(.082)
Game Genre			(.075)
RAS	.234**	1.264**	(.068)
AR	.026	-1.026	(.045)
SPW	.009	-1.009	(.065)
General News-ideology			(.070)
Conservative news	.025	-1.025	(.065)
Moderate news	-.053	-.948	(.090)
Webzine	.171**	1.186**	(.067)
Game News exposure			(.072)
Mass Media	-.055	-.947	(.089)
Online Media	-.040	-.961	(.067)
In-game Media	.069	-1.071	(.155)
Game network/discussion			(.008)
Game Co-playing	.255**	1.291**	(.125)
Discussion of game issue	.150**	1.162**	(.060)

Significance: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 1362

Log likelihood = 1290.582, $\chi^2 = 184.997$ ***, Nagelkerke R^2 (%) = 19.2

The model for trust in gamers explained 22.2% of the variance (Table 45). Only interest in game issues ($\beta = .320$, $p < .001$) and game play hours ($\beta = .132$, $p < .001$) were important predictors of trust in gamer (14.2% of incremental variance). Interest in game issues and game play hours remained significant when other variables were entered in the equation.

Table 45: Trust in gamers

	Block 1	Block 2	Block 3	Block 4	Block 5
Block 1: Demographics & Game					
Gender (male=1)	-.046	-.045	-.036	-.027	-.021
Age	-.027	-.019	-.013	.000	.012
Education	-.015	-.023	-.033	-.027	-.027
Income	.003	-.028	-.029	-.029	-.029
Children (under 20s)	-.003	.002	-.005	-.005	-.006
Game issue Interest	.32***	.264***	.226***	.216***	.205***
Ideology	.039	.026	.059*	.063*	.063*
Play hours	.132***	.076**	.082**	.070*	.058*
<i>Incremental R² (%)</i>					14.2***
Block 2: Game Genre					
RAS		.114**	.080*	.061	.037
AR		.119***	.099**	.078*	.076*
SPW		.019	.008	.003	-.001
<i>Incremental R² (%)</i>					3.4***
Block 3: General News-ideology					
Conservative news			-.075*	-.048	-.049
Moderate news			.105**	.106**	.106**
Webzine			.116***	.068*	.059 [#]
<i>Incremental R² (%)</i>					2.2***
Block 4: Game News exposure					
Mass Media				-.082*	-.087*
Online Media				-.041	-.042
In-game Media				.180***	.162***
<i>Incremental R² (%)</i>					1.9***
Block 5: Game network/discussion					
Game Co-playing					.066*
Discussion of game issue					.047
<i>Incremental R² (%)</i>					.5*
Total R ² (%)					22.2

Entries are standardized regression coefficients; Significance: [#]p < .1, *p < .05, ** p < .01, *** p < .001; N = 1362

Therefore, those who are interested in game issues and play games longer tend to have more trust in other gamers or guild members. Ideology ($\beta = .059, p < .05$) became significant when media

variables were introduced. This suggests that the effect of ideology was mediated via media use and game network and discussion. Conservative people are more likely to trust other gamers, and I will explore the connection between ideology and gamer participation in the next section of chapter.

Game genre accounted for 3.4% of incremental variance. RAS ($\beta = .114, p < .01$) and AR ($\beta = .119, p < .001$) contributed to trust in gamers. While the AR genre remained significant when media variables were entered, RAS dropped to non-significant when game news exposure variables were introduced. This suggests that, while the AR genre has a direct and an indirect effect, the effect of RAS was indirect via game news exposure and game co-playing/discussion when predicting trust in gamers. Those who play in the RAS and AR genres tend to trust their friends or other gamers.

The contribution of media usage accounted for 3.1% of incremental variance, and exposure to ideologically different media accounted for 2.2% of variance. Conservative newspaper ($\beta = -.075, p < .05$), moderate newspaper ($\beta = .105, p < .01$), and webzine ($\beta = .116, p < .001$) significantly predicted trust in gamers. Yet, moderate newspaper and webzine were positively related to trust in gamers while conservative newspaper was negatively related. Although moderate newspaper remained significant when game news exposure and game network/discussion variables were entered in the equation, conservative newspaper dropped to nonsignificant when game news exposure variables were entered, and webzine also dropped to nonsignificant when game network/discussion variables were introduced.

Game news exposure accounted for 1.9% of incremental variance. Mass media ($\beta = -.082, p < .05$) was negatively related to trust in gamers. The implication will be addressed in the discussion.

Game Co-playing and discussion accounted for .5% of incremental variance. Only game co-playing ($\beta = .066, p < .05$) was positively related to trust in gamers. This suggests that those who have a large number of game colleagues were more likely to trust other guild members or gamers. Unlike the case of predicting game community involvement and sense of game community belonging, discussion was not significantly related to trust in gamers.

The model for perceived learning by game playing explained 40.2% of the variance (Table 46). In the first block, only interest in game issues ($\beta = .299, p < .001$) and game play hours ($\beta = .298, p < .001$) were significant in predicting learning by game playing (20.3% of incremental variance). Interest in game issues and game play hours remained significant when other variables were entered in the equation. Those who have higher interest in game issues and play games longer tend to perceive that they learn about sociopolitical issues by playing games. Age ($\beta = .061, p < .05$) became significant when game genre variables were introduced. This suggests that the effect of age was mediated via media use, game network, and discussion.

Game genre accounted for 11.9% of incremental variance. RAS ($\beta = .310, p < .001$), AR ($\beta = .117, p < .001$), and SPW ($\beta = .064, p < .01$) contributed to learning by game playing. RAS remained significant when media variables were entered in the equation, yet SPW dropped to non-significant when game co-playing and discussion variables were introduced. This suggests that, while RAS and AR have a direct and an indirect effect, the effect of SPW was indirect via game co-playing/discussion when predicting learning by game playing. Those who play in the RAS and AR genres tend to learn about sociopolitical issues via game playing. The effect of game learning was stronger in RAS than AR.

Table 46: Perceived Learning by game playing

	Block 1	Block 2	Block 3	Block 4	Block 5
Block 1: Demographics & Game					
Gender (male=1)	.003	.023	.037	.032	.046
Age	.018	.061*	.069**	.055*	.080**
Education	.041	.023	.016	.021	.022
Income	.014	-.045	-.047	-.048	-.049
Children (under 20s)	.019	.033	.030	.027	.026
Game issue Interest	.299***	.192***	.141***	.097***	.078***
Ideology	.020	.002	.020	.021	.021
Play hours	.298***	.168***	.169***	.167***	.141***
<i>Incremental R² (%)</i>					20.3***
Block 2: Game Genre					
RAS		.310***	.261***	.228***	.178***
AR		.117***	.089***	.057*	.056*
SPW		.064**	.057**	.045*	.035
<i>Incremental R² (%)</i>					11.9***
Block 3: General News-ideology					
Conservative news			-.029	-.034	-.038
Moderate news			.048	.029	.029
Webzine			.189***	.111***	.094**
<i>Incremental R² (%)</i>					3.1***
Block 4: Game News exposure					
Mass Media				.035	.028
Online Media				.028	.026
In-game Media				.202***	.165***
<i>Incremental R² (%)</i>					3.2***
Block 5: Game network/discussion					
Game Co-playing					.141***
Discussion of game issue					.084**
<i>Incremental R² (%)</i>					1.7***
Total R ² (%)					40.2

Entries are standardized regression coefficients; Significance: # p < .1, *p < .05, ** p < .01, *** p < .001; N = 1362

The contribution of media usage accounted for 6.3% of incremental variance. Like the case of predicting game community involvement and sense of belonging, both webzine (β

= .189, $p < .001$) and in-game media ($\beta = .202, p < .001$) were significant indicators for learning by game playing. This result indicates that only game related media fostered perceived learning by playing games.

Game Co-playing and discussion accounted for 1.7% of incremental variance. Both variables ($\beta = .141, p < .001$; $\beta = .084, p < .01$) were positively related to game learning. Those who have more game colleagues and discuss game issues were more likely to perceive that they have chance to learn about sociopolitical systems/structure and come to know a new world while they play games.

The model for political knowledge explained 6.9 % of the variance (Table 47). Gender ($\beta = -.101, p < .001$), age ($\beta = .077, p < .05$), and ideology ($\beta = -.081, p < .01$) were statistically significant predictors of political knowledge (2.7% of incremental variance). This suggests that those who are male, younger, and liberal tend to have higher political knowledge. Interest in game issues ($\beta = .064, p < .05$) became significant in the final block, indicating that the effect of interest in game issues was significant when all other variables were controlled.

Game genre accounted for .9% of incremental variance. Only AR ($\beta = -.116, p < .01$) contributed to political knowledge. Playing in the AR genre was negatively related to political knowledge. The implication of AR on political knowledge will be addressed in the discussion.

The contribution of media usage accounted for 2.7% of incremental variance, and exposure to ideologically different media accounted for 1.5% of variance. Conservative newspaper ($\beta = .098, p < .01$) and webzine ($\beta = -.081, p < .05$) significantly predicted political knowledge. While conservative newspaper remains significant when game news exposure and game network/discussion variables were entered, webzine dropped to non-significant when game news exposure was entered in the equation.

Table 47: Political knowledge

	Block 1	Block 2	Block 3	Block 4	Block 5
Block 1: Demographics & Game					
Gender (male=1)	-.101***	-.087**	-.085**	-.087**	-.072*
Age	.077*	.100**	.088**	.099**	.107**
Education	.053	.051	.040	.033	.036
Income	-.002	.003	-.012	-.009	-.011
Children (under 20s)	-.012	-.010	-.006	.002	.009
Game issue Interest	.042	.052	.043	.046	.064*
Ideology	-.081**	-.073**	-.090**	-.080**	-.080**
Play hours	-.033	-.045	-.029	-.030	-.043
<i>Incremental R² (%)</i>					2.7***
Block 2: Game Genre					
RAS		.063	.069	.070	.059
AR		-.116**	-.124***	-.107**	-.092**
SPW		.031	.025	.021	.012
<i>Incremental R² (%)</i>					.9**
Block 3: General News-ideology					
Conservative news			.098**	.109**	.109**
Moderate news			.061	.067*	.068*
Webzine			-.081*	-.054	-.050
<i>Incremental R² (%)</i>					1.5***
Block 4: Game News exposure					
Mass Media				-.072	-.063
Online Media				.123***	.119***
In-game Media				-.078*	-.083*
<i>Incremental R² (%)</i>					1.2**
Block 5: Game network/discussion					
Game Co-playing					.073*
Discussion of game issue					-.065
<i>Incremental R² (%)</i>					.6*
Total R ² (%)					6.9

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Moderate newspaper ($\beta = .067, p < .05$) became significant when game news exposure and game network/discussion variables were introduced, and the effect remained significant until the final

block. Online media ($\beta = .123, p < .001$) and in-game ($\beta = -.078, p < .05$) also significantly predicted political knowledge. Although online media positively predicted political knowledge, in-game media negatively predicted political knowledge.

Game Co-playing and discussion accounted for .6% of incremental variance. Only game co-playing ($\beta = .073, p < .05$) was positively related to political knowledge. This suggests that those who have many game colleagues were more likely to be knowledgeable. Unlike the literatures on communication studies, discussion about game issues was not related to political knowledge. The implication of this result will be addressed in the discussion.

Regarding the ability to predict community belonging and gamer self-identification, these results yield some support for: H7: The RAS genre is positively related to community belonging and gamer self-identification; H9: Game Co-playing is positively related to community belonging; H10: Game Co-playing is positively related to gamer self-identification; and H11: Discussion about game issues is positively related to perceived game. H20: RAS and AR genres are positively related to trust in gamers is partially supported.

In predicting trust in gamers, H17: Game Co-playing was positively related to trust in gamers, yet H18: Discussion about game issues was not significant for trust in gamers. The results of the relationships between media and trust in gamers yield partial support for H15: Exposure to mainstream mass media (TV, radio, newspaper) will be negatively related to trust in gamers and H16: Exposure via in-game source (game quest/community) will be positively related to trust in gamers.

Implication and interpretations

Overall, findings of this section of chapter provide empirical support that game genre, media use, game co-playing and game discussion (gamer's communicative ecology) were

significant predictors of game community activities, trust, perceived identity, and perceived game learning. These results are important since results provide empirical evidence that a game genre's unique characteristics and game related media use contributes to community activities, gamer self-identification, and game learning. In particular, the finding that RAS predicts gamer self-identification and game learning implies that there is political meaning to game play and in-game quest as a learning environment. This empirical evidence for sense of community belonging and learning environment – something would be impossible to achieve without some sort of shared moral code, however rudimentary or sophisticated it may be – defies the Korean government's and media scholars' notion of gaming as necessarily promoting violence or addiction. Finally, the study found that discussion is a critical element of community involvement, sense of community belonging, and collective sense of identity.

In regard to demographic characteristics when predicting variables in game community, gender and age (younger and male) were significant indicators. Yet, when it comes to game learning or actual knowledge, older people were more likely to perceive that they learn about sociopolitical systems by playing games as well as have higher political knowledge. Though the current study only sampled an adult population, I had expected a negative or insignificant relationship between age and learning (younger people would learn more or at least perceive themselves as learning more about sociopolitical systems via gaming). This result suggests that there are no age restrictions to learning about society and politics via playing games.

The RAS and AR genres are both important predictors for game community, and gamers who play these genres are both behaviorally (community involvement) and psychologically (community belonging) involved in the game community. Yet, it is interesting to note that RAS and AR genres predicted those variables in a slightly different way. In order to be involved in the

community, feel a sense of community belonging, and build trust among other gamers, RAS players needed to have game co-playing and interpersonal communication. Play in the RAS genre in and of itself was not sufficient to realizing such behavioral and psychological outcomes.

This may be a reflection of the characteristics of the game genre; in the previous section, I mentioned that RAS gaming was positively related to game co-playing and discussion about games. For RAS players, collective intelligence is a crucial aspect of game play. Therefore, a gamer network and communication with co-players is necessary, and players must take strategic action based on multifaceted aspects of their own behavior, co-players' behaviors, and opponents' strategy and action. Without mutual trust or at least some semblance of camaraderie, it is difficult for RAS players to solve their common problems and achieve shared goals. Thus, these features of the RAS genre may lead gamers to feel a sense of community belonging and promote trust. On the other hand, players who inherently have higher social skills may be drawn to RAS games as the genre allows them to utilize their natural strengths. Furthermore, such complex cognitive activities make it more likely that RAS players will perceive themselves as gamers.

The study result suggests that only RAS was positively related to gamer self-identification. Perceiving themselves as a gamer, especially those who play in the politically-targeted RAS genre, may reflect gamers' courage and awareness of political circumstances. The study finding that both AR and SPW, which are not targets of game regulation, were not related to gamer self-identification additionally supports the notion of RAS players as serious gamers and a politically active group. However, it does not necessarily mean that AR players are not politically aware. This is because AR genre was also positively related to various game related variables that are positively associated with various participatory behaviors in the later part.

It is interesting to note that the AR genre has both direct and indirect effects on game community, sense of belonging, and trust in gamers but was not related to game co-playing. Conceptually, game co-playing (game friends or gaming network) and community involvement (community activities that contribute to the game community by reading or writing posts) are different. Nonetheless, AR players tend to play games alone, but this does not necessarily mean they feel lonely or do not engage in community. In fact, based on the interpretation of AR players' behavior in the previous section regarding media use and game discussion, they are more likely to engage in community to seek or share information. Study results support this.

Moreover, by discussing game issues with others, gamers can foster a sense of community belonging and collective sense of identity as gamers. As Walsh (2004) suggested, talking about specific issues (including informal and formal talk/discussion) fostered perceived identity. Moreover, discussion about game issues facilitates perceived learning effects (Eveland, 2004). The study results here showed that AR players were more likely to engage in discussion on game issues, and it may ultimately lead to the sense of belonging that fosters community involvement, and promoting self-identification as a gamer. Though social network and discussion amplified the behavioral and psychological outcomes of game community and mutual trust, AR players do not regard game network (game co-playing) as a necessary condition for such outcomes. Based on the result here, I consider an AR player as an *egocentric self-experienced* game player. Thus, as the finding suggested, AR game playing has both direct and indirect impacts on game community involvement, sense of belonging, and trust in gamers.

As I hypothesized, game playing was significantly related to perceived game learning. The study results suggest that playing in the RAS and AR genres has social learning effects as both genres directly and indirectly affected learning. For AR players, game friends and

interpersonal communication were not necessary to learn sociopolitical aspects by playing games. As the result suggested, RAS and AR both directly and indirectly affected game learning, implying that playing these genres necessarily encompasses a sociopolitical learning process. As previous studies argued, MMORPGs play as a socializing role (Williams et al., 2006; Martin, & Steinkuehler, 2010), and playing RAS games (which includes MMORPGs) also has a critical role for learning. Thus, we can view RAS in game quests as learning environments. While many studies on game learning explored the positive impacts of educationally predesigned games on learning, this study found that playing in an artificially violent and hypothetically addictive game genre (especially RAS) has an educational effect. This finding tells us that the Korean government and media scholars who study games as violence or addiction have overlooked the critical aspect of games as modes of learning.

Game related media (webzine and in-game media) play important roles in predicting various game related dependent variables in this chapter. It seems natural that those who have higher exposure to media that report game related issues and get information from in-game quest/game community are closely related to community activities and the effect of perceived game learning. One interesting finding is that, while moderate media both directly and indirectly predict trust in gamers when controlling the effects of game genre, media, and game co-playing/discussion, the effect of webzine dropped to non-significant when game network/discussion variables were entered. To build trust among gamers, findings suggested that gamers should engage in game activity that involves interacting with the game community to gain information via in-game quest. In other words, media exposure is insufficient; trust requires human interaction.

However, in the case of gamer self-identification, webzine was an important contributor to this self-perception but in-game exposure was not significantly related. By reading webzines, including game magazines and specialized IT news, people have more chances to gain in-depth information about sociopolitical issues related to gaming. The result suggested that such information is critical for people to perceive themselves as a gamer, and thus webzine strengthens collective identity of gamer. It reminds us the role of media as information source for surveillance and uncommon definition of the identity of gamer that has political significance in the Korean context. The results suggested that exposure on media that involves critical information, rather than exposure via in-game quest or community, makes people socially and politically aware and ultimately lead them to self-identify as a gamer.

This study also found that those who consume more mainstream media tend to distrust gamers, which may be based on the media's practice of generally negative and sensationalistic reporting that tends to blame gaming and gamers for a myriad of social problems. Based on the findings of this chapter, mainstream media not only negatively impacts the public's perception of gaming but also gamers themselves.

Political knowledge was the most intriguing part with respect to variables that are associated with games. It was unexpected that the AR genre was negatively related to political knowledge. Yet, this result can be explained with the characteristics of AR players. Previously, I described AR players are an egocentric self-experienced game player. Unlike other game genres that are mostly based on machine-mediated playing, the physical or offline experience is imperative to AR. To gain game playing experience and rewards, the players must voluntarily experience it at the physical space. Thus, I presume that shared knowledge is not as important for AR players; rather, they highly rely on the physical experience or heuristic knowledge.

Moreover, unlike the RAS genre, AR is highly based on the self-experience rather than the collective one. Thus, playing in the AR genre may have a negative impact on gaining political knowledge.

It seems natural that newspaper use is positively related to gaining political knowledge. However, both webzine and in-game exposure were negatively related to political knowledge. Webzine and in-game exposure increased perceived knowledge. It may be plausible that political knowledge, such as the name of a prime minister or the number of supreme court justices, is unrelated to the game issues, and relying on webzine or in-game activity for knowledge, instead of mainstream news media, may have a detrimental effect.

4-4 Gamer participation

In the previous section of the chapter, I explained both the theoretical and empirical notion of gamer's communicative ecology and game community activities/learning as well as the relationship between the two. In fact, the ultimate purpose of these analyses was to deeply understand what roles gamer's communicative ecology and game community/learning play for participatory behavior. Analyzing gamer participation is particularly important since this is the first empirical analysis to examine whether gamers behave socially and politically based on their views on game issues. I conceptualize gamer participation based on four aspects of gamer political behavior: in games action, action toward game companies on regulation, action for game regulation, and actual offline political action.

Regarding the role of game genre on participation, I expand on the sociopolitical contributions of MMORPGs and AR games on participation, based on the unique characteristics of each genre. In predicting gamer participation, as well as the influences of games, I examine the role of ideology and its impacts on certain online community activity with regard to game regulation. Additionally, I explore the connection between media discourse and gamer participatory behavior based on news content analysis (in Chapter 2). As for the behavioral consequences of media use, I examine the impacts of frames and sources of ideologically different news on gamer participation. Furthermore, how media representations of games and government intervention contributes to constructing self-identification as a gamer and its role in participation will be examined. As to the reasons why certain media consumption mobilizes or demobilize gamer participation, I apply the notion of corrective action (Rojas, 2010) and influence of attitudinal information on participatory impacts (Dilliplane 2011; Matthes, 2012). Finally, along with game discussion and community involvement, the role of emotion and

perception (perceived knowledge, sense of belonging, and trust) on participation will be further discussed.

Based on the previous analytical results and assumption that gamer's communicative ecology and game community antecedes gamer participation, I offer the following research questions and hypotheses:

H23: Playing the RAS genre will be positively related to gamer participation.

H24: Playing the AR genre will be positively related to gamer participation.

RQ20: What is the relationship between media exposure and gamer participation?

H25: Game Co-playing will be positively related to gamer participation.

H26: Discussion about game issues will be positively related to gamer participation.

H27: Community involvement will be positively related to gamer participation.

H28: Sense of community belonging will be positively related to gamer participation.

H29: Trust in gamers will be positively related to gamer participation.

H30: Gamer self-identification will be positively related to gamer participation.

H31: Perceived learning by playing games will be positively related to gamer participation.

H32: Political knowledge will be positively related to gamer participation.

Gamer participation is composed of four items asking respondents whether they had participated following activities in the previous 12 months: "Signed a petition for or against game regulations (both online and offline petition)," "Fought a war for or against guild or allays for political reasons (e.g. class issue or distribution of game items)," "Stopped playing games or withdrew from games that excessively regulated game playing," and "Voted for or against

candidates, who supported or opposed games and game-playing.” The measurement was made up of binary indicators (1 for yes, 0 for no) and averaged into a single index ($M = .12$, $S.D. = .23$, Cronbach’s $\alpha = .70$).

A multiple hierarchical regression was performed in order to examine whether playing specific game genre, media exposure, gaming social network, game discussion, game community involvement, sense of community belonging, trust in gamers, perceived learning by playing games, political knowledge, and gamer self-identification predict gamer participation. For the analysis, demographic variables (gender, age, education, income, status/existence of children), game issue interest, ideology, and game play hours were included in the first block of the equation. In the second block, I entered game genre variables including RAS, AR, and SPW. In the third block, I entered general media exposure variables including conservative newspaper, liberal & moderate-newspaper, and webzine. In the fourth block, I entered media exposure on game issue variables including mainstream mass media, online media, and in-game media. In the fifth block, I entered game co-playing and discussion about game issues. In the sixth block, I entered game community and learning variables including community involvement, sense of community-belonging, trust in gamers, perceived learning by playing games, political knowledge, and gamer self-identification.

The model for gamer participation explained 34.5% of the variance (Table 48). With the exception of income ($\beta = .067$, $p < .05$), demographic variables were not significantly related to gamer participation, and even this variable dropped to a non-significant level when game genre variables were entered the equation. Game issue interest ($\beta = .219$, $p < .001$), ideology ($\beta = .068$, $p < .05$), and game play hours ($\beta = .159$, $p < .001$) were important factors (13.4% incremental variance) in gamer participation. The effect of game issue interest disappeared when game co-

playing/discussion variables were entered, and game play hours dropped to non-significant levels when game community/learning variables were entered in the model. Interestingly, those who are conservative, more interested in game issues, and play games longer tend to engage in gamer participation.

Game genre accounted for 9.1% of incremental variance. RAS ($\beta = .119, p < .001$) and AR ($\beta = .259, p < .001$) contributed to gamer participation. While AR remained significant when other variables were entered, RAS dropped to non-significant when game co-playing/discussion variables were introduced. This suggests that AR has a direct and an indirect effect in predicting gamer participation, and the effect of RAS was mediated via game co-playing/discussion and game community/learning. The two genres were positively related to gamer participation, and the result specifically suggests that those who play AR were more likely to engage in gamer participation than players of RAS games.

The contribution of media use accounted for 3.7% of incremental variance, and exposure on ideologically different media accounted for 2.7%. Among ideologically different media exposure, moderate newspaper ($\beta = .080, p < .01$) and webzine ($\beta = .158, p < .001$) appeared significant and positive indicators of gamer participation. While the effect of conservative newspaper became significant when game news exposure variables were entered, the effect of webzine disappeared when game community and learning variables were entered the equation. Among game news exposure variables, mass media ($\beta = .109, p < .01$) and in-game exposure ($\beta = .071, p < .05$) were positively related to gamer participation. In-game exposure also disappeared when game co-playing and discussion variables were entered in the equation.

Table 48: Gamer's Participation

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Block 1: Demographics & Game						
Gender (male=1)	.025	.021	.033	.029	.026	.024
Age	.026	.019	.026	.005	.024	.037
Education	.021	.013	.004	.009	.006	.005
Income	.067*	.021	.019	.017	.017	.027
Children (under 20s)	-.027	-.019	-.024	-.032	-.041	-.043
Game issue Interest	.219***	.130***	.083**	.065*	.021	.000
Ideology	.068*	.043 [#]	.069**	.060*	.060*	.051*
Play hours	.159***	.092**	.096**	.101***	.088**	.031
<i>Incremental R² (%)</i>						9.4***
Block 2: Game Genre						
RAS		.119***	.077*	.068*	.026	.013
AR		.259***	.234***	.216***	.197***	.145***
SPW		-.025	-.034	-.035	-.037	-.031
<i>Incremental R² (%)</i>						9.1***
Block 3: General News-ideology						
Conservative news			-.055	-.078*	-.082**	-.070*
Moderate news			.080**	.065*	.064*	.066*
Webzine			.158***	.122***	.098**	.030
<i>Incremental R² (%)</i>						2.7***
Block 4: Game News exposure						
Mass Media				.109**	.090**	.098**
Online Media				-.056	-.054	-.042
In-game Media				.071*	.036	-.044
<i>Incremental R² (%)</i>						1.0**
Block 5: Game network/discussion						
Game Co-playing					.071*	-.011
Discussion of game issue					.173***	.129***
<i>Incremental R² (%)</i>						2.2***
Block 6: Community & learning						
Community-Involvement						.274***
Community-Belonging						.118***
Trust in gamers						.016
Game learning						.044
Political knowledge						-.058*
Gamer self-identification						.070**
<i>Incremental R² (%)</i>						10.1***
Total R ² (%)						34.5

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Game Co-playing and game discussion accounted for 2.2% of incremental variance. Both game co-playing ($\beta = .071, p < .05$) and discussion about game issues ($\beta = .173, p < .001$) were significantly related to gamer participation. The effect of game co-playing dropped to non-significant when game community/learning variables were entered. Both variables were positively associated with gamer participation.

Game community and learning accounted for 10.1% of incremental variance. Game community involvement ($\beta = .274, p < .001$), community belonging ($\beta = .118, p < .01$), political knowledge ($\beta = -.058, p < .05$), and gamer self-identification ($\beta = .07, p < .01$) appeared as significant indicators of gamer participation. While game related independent variables fostered gamer participation, political knowledge had a detrimental effect on gamer participation. The implication of these results will be discussed below.

Implication and interpretations

The results of study suggest that gamer's communicative ecology and gamer community are meaningful to gamer participation. Though the effect of game play hours became non-significant when game community and learning variables were entered in the model, game play itself positively predicts gamer participation. This result is an important contradiction to the findings of various communication studies and the stance of the Korean government that gaming inevitably leads to violent and addictive behavior. In regard to the media as antecedents to gamer participatory behavior, the analysis suggests that reading moderate newspaper (mobilization cue), exposure to game news via mass media (corrective action), and in-game news source (human network) played unique roles. Discussion about game issues emerged as political talk anteceded participation, and information seeking and expression on game community also played

a critical role in participation. Moreover, self-identification as gamer anteceded gamer participation.

The result that ideology was a significant indicator in gamer participation was unanticipated; conservative people were more likely to join gamer participation while also tending to support game regulation. While additional study is needed to examine the relationship between ideology and gamer participation, one possible explanation is that of specialized community. For example, the popular Korean site Ilbe, established as a far-right news clearinghouse that has evolved an extensive and outspoken community, is far better organized than communities for political progressives regarding game regulatory issues. The Ilbe community is overwhelmingly male and strongly opposed to the policy of the Ministry of Gender and Equality. While the Ministry of Gender and Equality is the main agent on regulating games, the members of the community show intense hatred toward the Ministry and encourage members to act as a group against game regulation. Therefore, while conservative people in general in Korea tend to support the policy of conservative politics (support regulation), conservative gamers would support personal freedom and oppose government regulation. Thus, their opposition to game regulation might be an extension of their general opposition to government intervention in the daily lives of citizens. Based on this result, it seems plausible that, by joining a community such as Ilbe, conservative gamers tend to have more trust in other like-minded gamers than politically progressive gamers and are more likely to participate in the gamer movement.

Regarding game genre, RAS and AR anteceded gamer participation. Although the previous section explored how RAS players are politically aware regarding predicting gamer self-identification, more than only playing in the RAS genre was required when considering

game network, discussion, community, and learning; thus, other conditions should be considered for RAS players to engage in participation. While the AR genre both directly and in-directly predicted gamer participation, the unique behavior characteristics of AR play, namely that it is a spontaneous experience, may be attractive to those who value the act of participation and experience, which may translate to their desire to experience action or mobilization. Therefore, I believe that this unique behavior of AR players may lead to higher levels of participation than players of other game genres.

By comparing the result of content analysis in the previous chapter, the relationship between media exposure and participation can be inferred. While further study is needed to explain why conservative newspaper has a detrimental effect on participation, I infer an answer by examining the role of source in newspapers. Based on the result of news content analysis, the frames of conservative and moderate newspaper converged into game as cultural contents in the final period. I argue that two newspapers' distinct source on this frame may be related to different impact on participation. In detail, while the source (journalist's beat) of conservative newspaper was related to interest group (mostly game companies and interest groups), liberal and moderate newspaper was more likely to cite opinions of civic organizations or human right groups. The former newspaper focused on criticism of government intervention in the game industry by emphasizing the economic aspects of cultural contents while the latter reported collective behaviors or campaigns that the cited groups conducted to promote cultural aspects of games. It might be possible that such collective action reported in the liberal/moderate newspaper operates as a mobilization cue for readers and encourages social action. Moreover, the detrimental effect of conservative newspaper on gamer participation can be explained that readers of conservative newspaper tend to be passive consumers of news reporting. Since

conservative newspapers do not encourage further action, the reader may not have motivated for participation.

While mass media only positively predicted gamer participation, the role of mass media as game news exposure on gamer participation is intriguing. The positive relationship between the two can be inferred that the biased reporting of mass media may lead gamers to act upon or correct media representation of gaming and gamers as violent addicts. Rojas (2010) argued that one of the important mechanism of participation against media hostility is correcting bias. Gamers in Korea may express their opinion publicly in order to correct negative representations of and resulting negative attitudes towards games/gamers. Another explanation of mass media's impact on gamer participation is that the biased representation of media may strengthen or mobilize those who support game regulation. This line of reasoning is based on previous researches of the relationship between news slant and participation; proattitudinal information is likely to be mobilizing, yet counterattitudinal news tends to demobilize political behavior (Dilliplane 2011; Matthes, 2012). Since gamer participation was defined to include both activities for and against game regulation, game news exposure to mainstream media played a mobilizing role.

Game discussion and community involvement played a significant role in gamer participation. This result suggested that the online game community greatly contributed to the mobilizing process and gamer active involvement in community strengthened democratization behaviors. Interestingly, it was not factual knowledge but perceived knowledge and psychological sympathy (sense of belonging and trust) that were the significant predictors of participation. This result reminds us of the rationality over emotion in social movement theory. In gamer participation, the finding that collective identity (gamer self-identification) and

affective ties (sense of belonging) that are culturally constructed shared understandings (McAdam, 2010) fostered participation suggested that emotion is an integral part of mobilizing gamers to social action. Based on the results, emotional connection to the gaming community was imperative for gamer mobilization.

4-5 Online, Civic, and Political participation

Participation is a critical element for a democratic society. In a democracy, political indifference and nonparticipation is anathema to the philosophical foundation of society; thus, participation is the cornerstone of democratic citizenship. Under this fundamental notion of citizenship, depending on the answer to the question of whether game playing and game activities encourage democratic citizenship, a new form of citizenship needs to be considered. Moreover, it may greatly challenge the current prevailing notion of games as violent/addictive and gamers as socially isolated.

In Chapter 4-4, gamer participation was analyzed and conditions that gamers need in order to engage or mobilize were discussed. In Chapter 4-5, I pose following questions: Are gamers participating in social action only regarding games? If not, are they participating in other forms of social or political engagement? If so, are gamer's communicative ecology and game community/learning experience contributing to other forms of participation?

Not only investigating the conventional form of participation, online participation is added. This is because, as Gil de Zuñiga and his colleagues (2010) argued, traditional measures of political participation would not cover a broad range of political activities in the new media environment, and they suggested that a new form of participation should be analyzed for online citizenship or digital citizenship.

First, I briefly compare the model of gamer participation and other forms of participation to explore the difference of predictive roles of games and game activities. More specifically to gaming, the variables that are not closely related to politics, such as game playing hours, game genre, interest in game issues, and discussion about games will be further examined. Moreover, the roles of game genres on various participations will be extensively analyzed and also inferred

regarding why the AR genre in particular contributes to social action, based on the notion of an early adopter and study of mobile technology on education (Dijkers, 2014; Dijkers, Martin, & Coulter, 2012; Dennen & Hao, 2014; Macklin & Guster, 2012; Martin et al., 2014; Mathews & Holden, 2012; Miller & Doering, 2014; Squire & Jan, 2007). To compare roles of different game genres and the conditions that allow participatory results, the current study offers in-depth relationships of gamer's communicative ecology and its predictive roles. In this manner, this study focuses on the role of games that are not intended for education on participation.

As I analyzed the gamer participation model, the role of media, particularly ideologically different media (mobilization cue) and game related information channels (that involve human connection and human communication) became apparent. In addition, as followed by the concept of connective action (Bennett & Segerberg, 2013) and online community as an alternative platform for the public sphere (Benkler, 2006), the impacts of discussion about games and online game community involvement on participations will be discussed. Finally, I compare the role of perceived knowledge and the actual knowledge on participation. Whether political knowledge enhances participation among gamers as political communication studies suggested or what role perceived game leaning or psychological factors contribute to participation will be an interesting inquiry to understand the political aspect of gaming.

Before analyzing the predictive model of online and offline participation, as a theoretical basis, I explore the impacts of new media technology on community building and participation. Since this study regards games as emerging media, understanding how the theory of new media views participation, both organizational and individual, is important to the current study.

Gamer versus non-gamer: demographic and game play

Before analyzing the results of the regression model predicting various gamer participatory behavior, I will briefly describe the difference between general population (N = 1759) and gamer population (N = 1362) on a) media usage, b) game related variables (gamer's communicative ecology and community/learning), and c) participation. The goal of this comparison is to explore what effects the amount of game play has on the survey population. The following empirical findings will provide important contradictory evidence that game playing is positively related to various participatory behaviors as opposed to the Korean government's criticism of gamers as a politically indifferent and socially isolated group (see Appendix 4).

Media usage

Overall, there is not much difference between general population and gamers regarding media usage. In comparison to the general population, the effect of education in predicting online media sources for game information was not significant among gamers. When predicting webzine, income was not a significant indicator among gamers. Game play hours was negatively related to moderate newspaper and mass media exposure as game information source in gamer's population. For gamers, play hours was not a significant indicator for online media exposure as a source for game information. Except online media exposure, the effects of interest in game issues among gamers were stronger than the general population in predicting ideologically differing media exposure and media exposure on game news (Appendix 4).

Game/learning variables

As in the case of media usage, there was not much difference between the general population and gamers regarding game community. In predicting trust in gamers, ideology was not a significant indicator among gamers. Only significant levels (standard beta) of demographics and game play hours variables were slightly changed. Overall, the effects of gender and age on game/learning variables were slightly lower in the gamer population, but the effects of education, income, and game issue interest were slightly higher. While game play hours proved stronger factors in predicting various game related variables in the general population than with gamers, the effect of game play hours was only higher in predicting trust in gamers among gamers. It can be interpreted that, as the game play hours of non-gamers is set to zero, this effect altered the results such that the coefficient is larger among the general population than the regression model when only gamers are analyzed (Appendix 4).

Participatory behavior variables

With respect to predicting participatory variables, the effects of gender, age, education, and game issue interests were stronger among gamers. While ideology and game play hours were not significant factors in predicting online participation among gamers, those in the general population who play games longer tend to join online participation. As opposed to the general population, income and ideology did not antecede political participation among gamers (Appendix 4).

Role of new media technology on participation

The institutional logic and the impact of new media technology on participation in general and the mobilization process in specific have different points of importance for scholarly concerns. Institutionalism (and especially resource mobilization and contentious politics) focuses on the structural aspects and available political opportunities or resources (as a cost-benefit/gain mechanism) that are allowed for actors to mobilize. However, the scholars who highlight the new possibility of digital media technology on social movements have altered the assumption of the cost-benefit structure. For instance, Benkler (2006) demonstrated that network technology allows non-market/non-propriety production modes, large-scale cooperative actions, and lowering communication/information cost. Bimber (2003) argued that low-cost information production or distribution changes to the social structure where collective action may be possible without the assistance of traditional institutions. Bennett and Segerberg (2013) also assume that social media technologies imply democratic and participatory power under the notion of cost-reduction and connectivity. Moreover, Benkler's (2006) notion is similar to Shirky's (2008) non-institutional organization model that encompasses a new way of sharing, cooperation, and collective action. Shirky (2008) even further argued that costs of managing groups are no longer the strong limiting factor, since the cost is practically "non-existent" and the group is no longer affected by institutional logic due to the new technology.

Yet, the evolving role of individualism within society due to advances in digital technology increased the controversy regarding digital technology's role in politics, community building, and civic/political participation (Kenski, & Stroud, 2006; Kwak, Shah, & Holbert, 2004; Shah, Cho, Eveland, & Kwak, 2005; Tolbert, & McNeal, 2003; Velasquez, & Rojas, 2017). Scholars view the role of technology as an originator and engine of social transformation.

Yet, this impact further divides into notions of politics as usual (normalization thesis) vs. unusual politics on social/political life (Xenos & Foot, 2005) – or an optimistic vs. pessimistic perspective of technology’s democratic potential (DiMaggio et al., 2001). Pessimists argue that digital technology results in a decline in civil community and catalyzes civic entropy, creating cyberbalkanization (Putman, 2000). At the same time, such a process leads to opinion insulation – communication only with like-minded others (Sunstein, 2001), inequality of participation based on individual media preference (Prior, 2005), fragmentation and polarization (Sunstein, 2002) and unequal/power-law distribution in online interactions (Hindman, 2008), emphasizing the concentration of attention/distribution. Scholars in this camp claim that new technologies do not result in an information abundance but an information overload such that individual interactions, flow of information, and political opportunities (rich vs. poor) do not differ from the past or are even worse than the mass-media society of the 20th century.

The optimistic school of thought (Jones, 1998; Benkler, 2006; Bimber, 2003; Xenos & Moy, 2007; Mossberger, Tolbert & McNeal, 2008; Rainie & Wellman, 2012) asserts that the easily available information online helps citizens to be more informed about politics. In turn, citizens are more deliberatively participative in the democratic processes and their communities, using communication technologies that offer new channels for contacting officials, discussing issues, and mobilizing people online to share diverse opinions. Regarding the process of organizing in the mobilization process, scholars have regarded digital technology as a (self-)organizing tool (Shirky, 2008) or communication/networks as an important part of organizational structure, even functioning as organizing agents (Bennett & Segerberg, 2013).

In addition to Shirky (2008), Bennett and Segerberg (2013) contend that personalized politics with more digitally mediated collective action (*personal action frames*) or logic of

connective action bring about the role of communication as an organizing principle in personalized, digitally networked action. By using personal communication devices that are networked through shared media platforms, people seek more personalized and individually expressive action frames, thus they argued that people *affiliate* rather than join as part of a formal process of *membership*. Bennett and Segerberg (2013) further argued that personal action frames may substitute the role of mass media and intensify networking for organizations. In this regard, as opposed to the previous political contention, since “networks operate through the organizational processes of social media,” strong organizational control or the “symbolic construction of a united we” does not factor into the mobilizing process and movement formation (p. 28).

Based on the roles of new media technology on participation, I develop the argument that engaging in online games and game activities allows a unique organizing structure where new ways of sharing and cooperation for collective action may be possible without the traditional institutions. Moreover, as Bennett and Segerberg (2013) suggested, online connected game activities and communication among gamers serve as an organizing principle in personalized, digitally networked action.

Research question and measurement of core concepts

Based on the predictive model of gamer participation, I will explore the role of gamer’s communicative ecology and game community/learning on a) online participation, b) civic participation, and c) political participation. I offer the following research questions and hypotheses regarding participation:

RQ21: What is the relationship between playing a specific game genre and more general online, civic and political participation?

RQ22: Will game news media exposure be related to participation?

RQ23: Will gaming networks be related to participation?

RQ24: Will discussion of game issues be related to participation?

RQ25: Will game community involvement be related to participation?

RQ26: Will trust in gamers be positively related to participation?

RQ27: Will perceived game learning by playing games be related to participation?

H33: Political knowledge will be positively related to participation.

Participation: Online participation consisted of seven items measuring how often respondents had engaged in the following activities: “Comment current events and politics,” “Discuss the news and opinion columns that appear in the online media,” “Participate in online discussion forums,” “Express your opinion on social and political issues,” “Sign up to volunteer for a social or political campaign,” “Support political protests,” and “Mobilize your contacts around social or political causes.” A 6-point scale was used for each item from 0 (never) to 5 (very frequently). An index of online participation was created by averaging scores across measures ($M = 1.19$, $S.D. = 1.05$, Cronbach’s $\alpha = .92$). Online participation includes expressive online activities (first four items; Gil de Zuñiga, Veenstra, Vraga, & Shah, 2010) and online political activities.

The data collected in terms of civic participation was measured using three items that asked respondents whether they participated in the following activities in the last 12 months: “Donated money or other objects to a group that does social or environmental work”, “Done

volunteer work”, and “Worked in a community project.” The measurement was made of binary indicators (1 for yes, 0 for no) and averaged into a single index ($M = .24$, $S.D. = .31$, Cronbach’s $\alpha = .58$).

Political participation was composed of six items asking respondents whether they participated in the following activities in the last 12 months: “Attended a political rally,” “Attended a public meeting of your city,” “Signed a petition,” “Send message or leave comments in a live radio or television show to express your opinion,” “Attended a social or political protest,” and “Voting.” The measurement was made of binary indicators (1 for yes, 0 for no) and averaged into a single index ($M = .24$, $S.D. = .20$, Cronbach’s $\alpha = .60$). As many studies have measured, the operationalization of political participation encompasses four dimensions: voting, campaign activity, contacting officials, and collective activities (Verba & Nie, 1972; Nie, N. H. 1972).

Predicting online, civic, and political participation

The model for online participation explained 50.2% of the variance (Table 49). Demographic variables, game issue interest, and game play hours were important factors (18.9% incremental variance) for online participation. Upon entry, education ($\beta = .096$, $p < .001$), income ($\beta = .088$, $p < .01$), status of children ($\beta = .066$, $p < .05$), and game issue interest ($\beta = .373$, $p < .001$) appeared as significant predictors of online participation. While income dropped to non-significant levels when game genre variables were entered in the model, education and status of children remained significant. Interest in game related issues also remained significant until game community and learning variables were entered; it was mediated via game community and learning in predicting online participation. This suggests that those

who have a higher level of education, higher income, children under 20 years old, and more interest in game issues were more likely to engage in online participation.

Game genre accounted for 13.5% of incremental variance. RAS ($\beta = .146, p < .001$), AR ($\beta = .287, p < .001$) and SPW ($\beta = .072, p < .01$) contributed to online participation and AR remained significant when media and game related variables were entered. However, RAS and SPW dropped to non-significant when game co-playing/discussion variables were introduced. This suggests that playing in the AR genre has a direct and an indirect effect on predicting online participation. The effect of RAS and SPW were mediated via game co-playing/discussion and game community/learning. Though all three genres were positively related to online participation, those who play AR were more likely to engage in online participation than players in the RAS and SPW genres.

The contribution of media use accounted for 14.2% of incremental variance, and exposure to ideologically different media accounted for 10.9% of incremental variance. Moderate newspaper ($\beta = .241, p < .001$), webzine ($\beta = .202, p < .001$), and in-game exposure ($\beta = .201, p < .001$) were positively related to online participation. This result suggests that moderate newspaper reading and game related media use increased online engagement. Game Co-playing and discussion accounted for 2.3% of incremental variance. Only discussion about game issues ($\beta = .190, p < .001$) was significantly related to online participation. This result suggests that discussion, rather than gamer network, fostered online engagement.

Table 49: Online Participation

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Block 1: Demographics & Game						
Gender (male=1)	-.011	-.032	-.004	-.010	-.021	-.024
Age	.024	.024	.022	.004	.016	.014
Education	.096***	.080**	.047*	.053**	.049*	.048*
Income	.088**	.028	.004	.003	.005	.012
Children (under 20s)	.066*	.069**	.066**	.062***	.050*	.050*
Game issue Interest	.373***	.267***	.163***	.117***	.068**	.050*
Ideology	-.024	-.050*	-.021	-.021	-.021	-.027
Play hours	.042	-.058*	-.028	-.029	-.033	-.055*
<i>Incremental R² (%)</i>						18.9***
Block 2: Game Genre						
RAS		.146***	.069*	.035	.005	-.012
AR		.287***	.225***	.192***	.167***	.148***
SPW		.072**	.044*	.033	.036	.036
<i>Incremental R² (%)</i>						13.5***
Block 3: General News-ideology						
Conservative news			.029	.020	.017	.024
Moderate news			.241***	.219***	.218***	.211***
Webzine			.202***	.122***	.098***	.075**
<i>Incremental R² (%)</i>						10.9***
Block 4: Game News exposure						
Mass Media				.053	.032	.036
Online Media				.028	.032	.037
In-game Media				.201***	.173***	.137***
<i>Incremental R² (%)</i>						3.3**
Block 5: Game network/discussion						
Game Co-playing					.019	.006
Discussion of game issue					.190***	.173***
<i>Incremental R² (%)</i>						2.3***
Block 6: Community & learning						
Community-Involvement						.092***
Community-Belonging						-.035
Trust in gamers						.062**
Perceived game learning						.081**
Political knowledge						-.014
Gamer self-identification						-.001
<i>Incremental R² (%)</i>						1.3***
Total R² (%)						50.2

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Game community and learning accounted for 1.3% of incremental variance. Game community involvement ($\beta = .092, p < .001$), trust in gamers ($\beta = .062, p < .01$), and game learning ($\beta = .081, p < .01$) were positively related to online participation. This finding suggests that those who are involved in the gaming community, trust other gamers, and think that games have educational benefits were more likely to engage in online participatory behaviors.

The model for civic participation explained 24.9% of the variance (Table 50). In the first block, gender, age, education, income, interest in game related issues, and game play hours ($\beta = .079, p < .01$; $\beta = .109, p < .001$; $\beta = .132, p < .001$; $\beta = .096, p < .01$; $\beta = .204, p < .001$; $\beta = .074, p < .01$) were significant indicators of civic participation. The effect of game play hours dropped to non-significant when game genre variables were entered, and the effect of interest in game issues also disappeared when game co-playing and discussion variables were entered.

Based on this result, those who are female and older with higher education, higher income, higher interest in game issues, and longer game play hours were more likely to engage in civic participation.

Game genre accounted for 5.3% of incremental variance. RAS ($\beta = .084, p < .05$) and AR ($\beta = .2, p < .001$) significantly contributed to civic participation. While AR remained significant when other variables were entered, RAS dropped to non-significant when media variables were introduced. This suggests that the AR genre has a direct and an indirect effect in predicting civic participation; the effect of RAS was mediated via other independent variables. The two genres were positively related to civic participation, like the case of online participation and gamer participation, and this result particularly suggests that those who play AR games were more likely to engage in civic participation than players of RAS games.

Table 50: Civic Participation

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Block 1: Demographics & Game						
Gender (male=1)	.079**	.074**	.089**	.085**	.087**	.085**
Age	.109***	.103**	.099**	.086**	.102**	.109***
Education	.132***	.126***	.108***	.111***	.110***	.107***
Income	.096**	.061*	.047	.046	.046	.052
Children (under 20s)	-.033	-.028	-.030	-.034	-.039	-.040
Game issue Interest	.204***	.137***	.085**	.065*	.038	.028
Ideology	.021	.002	.017	.014	.014	.010
Play hours	.074**	.023	.042	.043	.030	-.008
<i>Incremental R² (%)</i>						10.4***
Block 2: Game Genre						
RAS		.084*	.048	.035	.001	-.003
AR		.200***	.168***	.152***	.142***	.108**
SPW		-.013	-.029	-.032	-.036	-.032
<i>Incremental R² (%)</i>						5.3***
Block 3: General News-ideology						
Conservative news			.021	.010	.007	.014
Moderate news			.141***	.130***	.129***	.128***
Webzine			.080**	.044	.027	-.016
<i>Incremental R² (%)</i>						2.7***
Block 4: Game News exposure						
Mass Media				.054	.042	.049
Online Media				-.009	-.009	-.002
In-game Media				.084*	.056	.001
<i>Incremental R² (%)</i>						1.0*
Block 5: Game network/discussion						
Game Co-playing					.071*	.025
Discussion of game issue					.108**	.082**
<i>Incremental R² (%)</i>						2.2***
Block 6: Community & learning						
Community-Involvement						.217***
Community-Belonging						.048
Trust in gamers						.015
Perceived Game learning						.038
Political knowledge						-.023
Gamer self-identification						-.011
<i>Incremental R² (%)</i>						4.6***
Total R ² (%)						24.9

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

The contribution of media use accounted for 3.2% of incremental variance, and exposure to ideologically different media accounted for 1%. Among ideologically different media exposure, moderate newspaper ($\beta = .141, p < .001$) and webzine ($\beta = .080, p < .01$) were significant and positively related to civic participation. For game news exposure variables, only in-game exposure ($\beta = .084, p < .05$) was positively related to civic participation. The effect of webzine disappeared when game news exposure variables were entered in the equation. Moreover, in-game exposure also disappeared when game co-playing and discussion variables were introduced. Among various media variables, moderate newspaper was strongest in predicting civic participation.

Game Co-playing and discussion accounted for 2.2% of incremental variance. Both game co-playing ($\beta = .071, p < .05$) and discussion about game issues ($\beta = .108, p < .01$) was significantly related to civic participation. The effect of game co-playing dropped to non-significant when game community/learning variables were entered in the model. Both variables were positively associated with civic participation.

Game community and learning accounted for 4.6% of incremental variance. Only game community involvement ($\beta = .217, p < .001$) was a significant indicator of civic participation. The implication of community involvement on civic participation will be addressed in the discussion.

The model for political participation explained 28.3% of the variance (Table 51). In the first block, age, education, interest in game related issues, and game play hours ($\beta = .073, p < .05$; $\beta = .056, p < .05$; $\beta = .207, p < .001$; $\beta = .106, p < .001$) appeared as significant indicators of political participation. While the effect of other variables dropped to non-significant when variables in the later blocks were introduced, only age remain significant until the final block.

Based on this result, those who were older and had higher education, higher interest in game issues, and longer game play hours were more likely to engage in political participation.

Game genre accounted for 6.3% of incremental variance with RAS ($\beta = .083, p < .05$) and AR ($\beta = .213, p < .001$) contributing to political participation. While AR remained significant when other variables were entered, RAS dropped to non-significant when media variables were introduced. This suggests that the AR genre has a direct and an indirect effect in predicting political participation while the effect of RAS was mediated via other variables. The two genres were positively related to political participation, like the case of online political and civic participation, and the result suggests that those who play in the AR genre were more likely to engage in political participation than players of RAS.

The contribution of media use accounted for 6.4% of incremental variance and exposure to ideologically different media accounted for 4.9%. Among ideologically different media attention, moderate newspaper ($\beta = .236, p < .001$) and webzine ($\beta = .061, p < .05$) appeared as significant and positive indicators in predicting political participation.

While the effect of webzine disappeared when game news exposure variables were introduced, this effect becomes significant again when all other variables are controlled. In game news exposure variables, only in-game exposure ($\beta = .137, p < .001$) was positively related to political participation. Yet, in-game exposure disappeared when game co-playing and discussion variables were introduced. Moderate newspaper, webzine, and in-game exposure were positively related to political participation; however, conservative newspaper was negatively related to political participation.

Table 51: Political Participation

	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Block 1: Demographics & Game						
Gender (male=1)	.038	.023	.037	.033	.023	.025
Age	.073*	.067*	.065*	.051 [#]	.061*	.072*
Education	.056*	.046	.021	.026	.022	.018
Income	.052	.012	-.002	-.003	-.002	.003
Children (under 20s)	.028	.030	.021	.018	.008	.008
Game issue Interest	.207***	.135***	.080**	.049	.009	.001
Ideology	-.035	-.054*	-.013	-.013	-.014	-.014
Play hour	.106***	.045	.072*	.071*	.069*	.032
<i>Incremental R² (%)</i>						7.5***
Block 2: Game Genre						
RAS		.083*	.046	.024	.001	.001
AR		.213***	.181***	.158***	.137***	.101**
SPW		.032	.008	.001	.004	.011
<i>Incremental R² (%)</i>						6.3***
Block 3: General News-ideology						
Conservative news			-.047	-.055	-.057	-.054
Moderate news			.236***	.221***	.220***	.222***
Webzine			.061*	.006	-.013	-.061*
<i>Incremental R² (%)</i>						4.9***
Block 4: Game News exposure						
Mass Media				.044	.026	.035
Online Media				.009	.012	.017
In-game Media				.137***	.115**	.061
<i>Incremental R² (%)</i>						1.5***
Block 5: Game network/discussion						
Game Co-playing					.011	-.041
Discussion of game issue					.155***	.128***
<i>Incremental R² (%)</i>						1.5***
Block 6: Community & learning						
Community-Involvement						.268***
Community-Belonging						.061 [#]
Trust in gamers						-.007
Game learning						-.007
Political knowledge						-.005
Gamer self-identification						.019
<i>Incremental R² (%)</i>						6.6***
Total R ² (%)						28.3

Entries are standardized regression coefficients; Significance: *p < .05, ** p < .01, *** p < .001; N = 1362

Game co-playing and discussion about game issues accounted for 1.5% of incremental variance. Only discussion about game issues ($\beta = .155, p < .001$) was significantly related to political participation. The effect of discussion on game issues remained significant when game community and learning variables were entered the equation; this suggests that having social gaming friends did not lead players to engage in political participation, yet discussion of game issues mobilized gamers to participate in a political purpose.

Game community and learning accounted for 6.6% of incremental variance. Game community involvement ($\beta = .268, p < .001$), and community belonging ($\beta = .061, p = .051$) were positively related to political participation. Those who are involved in community and feel belonging to their community tend to participate more. Compared to community belonging, community involvement that included information seeking and expression had a stronger impact on voting or attending a political rally/protest.

Implication and interpretations

The findings suggest that gamer's communicative ecology and gamer communities play critical roles in various participatory behaviors, specifically that the predictive pattern of gamer participation is similar to online and civic/institutional participation. As stated in the previous chapters, interest in game issues as a political interest motivated gamers to engage in various participatory behaviors. Most importantly, game discussion, regardless of the subject matter, and community involvement that operationalized as information seeking and expression emerged as critical indicators for participatory behaviors. Nevertheless, having a game network or co-player was not strong enough for participation. Thus, to participate socially or politically, gamers should be actively involved in discussion and information sharing.

The effects of game play hours on participation were mixed in this study. While game play hours have a negative impact on online participation, it positively influenced gamer, civic and political participation. This result clearly suggests that game play itself has some positive impact on real-world/offline participatory behaviors, and this sociopolitical role of gaming is exactly what the Korean government disregards. However, further study is needed to examine why game play hours was a significant predictor of participation yet predicted it in a counterintuitive way. Alternatively, this study demonstrates that not only the amount of game play but also game related variables, such as genre, networks, discussion, and community engagement play important mobilizing roles in participation.

As well as the RAS genre, the result of the role of the AR genre on participation contributed to the extension of the communication literature, since findings show that genre played a significant role on various participatory behaviors. It is particularly remarkable that AR genre play was positively related to all participation both directly and indirectly. I provide two possible explanations of the AR genre's unique contribution to participation below.

Though some studies focus on the potential health benefits of AR games (e.g. Althoff, White, & Horvitz, 2016; Ma, & Anderson, 2014; Van Schaik, et al., 2008), literature that examines the role of the AR genre on sociopolitical behavior is lacking. Since this area is new to academia, especially in the field of communication, I will explain this finding based on the behavior characteristics of AR players and the role of mobile technology (e.g. Squire, 2010) as an extension of mobile learning.

One explanation is related to the unique behavior characteristics of AR players as egocentric self-experienced game players; another is related to the notion of an early adopter. The wildly popular Pokémon GO was released only shortly before the survey was conducted,

and the majority playing in the AR genre seemed to be adopters of this type of gaming. Early adopters in Korea have a unique position, especially in their political roles that is beyond the area of technology; they tend to set the social, cultural, and political trends. Most well-known example is DC Inside (or simply 'DC'), a website originally created for sharing information about digital cameras that has evolved into the Korean equivalent of Reddit. At DC, community members discuss social and political issues as well as mobilize people to social action. Community members serve as opinion leaders, forming public opinion in the new media. Unlike the traditional early adopters whose influences were derived from social status and translated their status to consumption, the new early adopters wield their influences over social issues by consuming new technology. Thus, AR genre players may be opinion leaders who actively participate socially and politically.

Another possible explanation of the AR genre's contribution to participation is based on the mobile technology's role in education. Scholars in political communication have highlighted the role of mobile technology as a mobilizing tool, generating new modes of organization and increasing political participation such as the revolutionary movement potential of smart mobs (Rheingold, 2002) and grass-roots civic participation (Jenkins, 2006; Shirky, 2009). Parallel to media studies, game/learning academia also discusses mobile media and refines the AR and Interactive Storytelling (ARIS) platform, which is both an open-source tool for creating and disseminating mobile AR learning experiences and a socio-technical network (Klopfer, & Squire, 2008; Martin et al., 2014). The primary benefit of ARIS is that, since the game project is located in the player's community, game players with local knowledge can have an intimate/nuanced personal experience with the space. Moreover, their collaborative efforts foment deeper understanding, leading players to become community organizers of their social

system (*soft modding*, see Hayes & Gee, 2010). For instance, Wagler's project (see Squire, 2011) suggested that combining game structures with physical space allows gamers to realize their true identity since "what you know is directly related to what you are able to do and ultimately, who you become" (Barab, et al., 2012, p. 320), creating a hybrid *third space* (Squire & Jan, 2007) and encouraging democratic citizenship.

Although the AR game genre in this study is not designed for education like ARIS, both types of game shares important aspects of active participation. For location-based AR games, gamers are emotionally and cognitively interacting with the environment (local-community engagements) to create designed experiences for solving multidimensional issues (Squire & Jan, 2007) and turning the gamers' world into a game board (Squire, 2011). I believe that, for AR gamers, the active experiencing in games turns into active participation in society. Thus, the AR genre has incremental effects on various modes of participation.

Like the previous studies on the role of MMORPGs on participation, this study also found that, by playing in the RAS genre, gamers are more likely to be involved in participatory activities. However, game play alone was not sufficient. Those playing in the RAS genre required other conditions including media use, game network, discussion, community, and learning to engage in participation. None of the institutional or game participation was related to SPW, and it seems that SPW players are a relatively uninformed and passive group from a political perspective.

While media as a game news source was not effective on participatory behavior, like the result of gamer participation, liberal and moderate newspaper positively related to various participation. While the interpretation of the role of liberal and moderate newspaper that I offered about gamer participation may be limited to the case of game regulation, the implications

of ideologically divergent newspapers' different points of emphasis on information sources in this study may apply to other forms of participation. Thus, when it comes to the relationship between moderate newspaper use and participation, it can be inferred that the mobilization cue, which is related to the news source, potentially mobilizes readers to civic and political participation.

The finding suggests that in-game channel plays a critical role in online participation. In seeking information, those using online channels tended to be more active than those using mass media; online media users tend to be relatively active news seekers. However, online media use was not substantive predictor of participation. Exposure to game news via in-game channel was positively associated with participation. The difference between mass media, online media, and in-game media is the existence of human connection/network and comparatively higher level of participatory efforts. Though the degree of media involvement on three channels of game news exposure is weaker than general media exposure to newspaper or webzine, in-game channel requires more than passive exposure to information; gamers have to engage in communication while they play games or visit online forums. Thus, the finding that in-game news source antecedes participation suggests that human connection and engagement of communication are essential in order for people to participate.

Moreover, regarding the positive role of in-game news sources on online participation, the result of this relationship can be inferred by the notion of incidental news exposure on participation (Kim, Chen and Gil de Zúñiga, 2013). In fact, I did not measure the motivation or mechanism of gamer information seeking; whether they seek information intentionally or come across it by chance, especially via online forum or in-game quests. Even if gamers did not intentionally seek information, in-game news sources can positively influence participation.

Unlike goal-oriented or intentional media usage, the mechanism of news exposure or information about game issues via in-game quest or online forum is similar to incidental news exposure (Kim, Chen and Gil de Zúñiga, 2013) or a byproduct of online activities (Tewksbury et al., 2001). For the effects of incidental news exposure, Tewksbury and his colleagues (2001) found a positive relationship between incidental online news exposure and political knowledge. Kim, Chen and Gil de Zúñiga (2013) further suggested that incidental news exposure was positively associated with political participation.

As game discussion has positive impacts on all participation, community involvement that was measured by active information seeking and expression plays the most significant role in participatory behaviors. With regard to the notion of connective action, as Benkler (2006) argued, game community operated as an alternative platform for the public sphere where gamers have opportunities to express opinions and increase engagement in social discourse, and communication in game community emerged as a significant part of organizational structure and organizing agents for social action, enabling and facilitating loosely affiliated (online) community members' ability to exchange information about personal experiences and ideas (Bennett and Segerberg, 2013). Game communities provide the opportunity to connect with others and catalyze a sense of belonging for civic and political participation (Boulianne, 2009).

Finally, the findings suggest that political knowledge was not significantly related with participation, which is unusual. This finding suggests that, for gamers, actual knowledge was not an important factor for participation. In other words, being knowledgeable did not cause any further action. Moreover, perceived game learning was not a significant predictor of participation. Perception is only related to online behavior (online participation); the game

learning effect was not strong enough to produce offline action. Instead, the study showed that psychological attachment (sense of belonging) is the crucial factor for institutional participation.

CHAPTER 5. CONCLUSION

The dissertation broadly examined how the issue of game regulation has developed, particularly in Korea, and how games and game playing activities promote social and political behavior. First, by analyzing news contents, I explored ideologically media's distinct use of frames and sources across different periods of time. The study revealed that media's tendency to represent gaming and gamers negatively has an impact on the public's perception of games and, consequently, their attitudes towards game regulation. I also explored how the activities of interest groups have become formalized to affect policy makers' and politicians' attempts to leverage this polarized environment to secure interest group support.

Realizing these negative views were largely based on narrow or dated information regarding gaming and gamers, I sought data on the political aspects of gaming as well as gamers' various social and political behaviors. I specifically focused on the role of individual gamers in politics, examining the political awareness of gamers and how game related variables contributed to participatory behaviors. Alternative to formalized or institutionalized activities, I explored how community-level behavior catalyzed gamers to engage in participation with the help of digital technology. From an analytical perspective, the notion of online community building and connective action was applied to gamers' individual and community behavior in the mobilizing process based on the representative national sample.

The dissertation suggests new insights into the potential positive roles of entertainment in a new media era and the sociopolitical aspects of games that have been ignored in communication studies. Though some studies find that the actual effect of entertainment media on political behavior is based on content, most media studies on entertainment are myopically

negative. Moreover, social science scholars disregard the democratic potential of games and gaming communities. The majority of studies argue that entertainment has a detrimental effect on democracy, which may have been likely regarding 20th century ‘consumer’ entertainment such as passive television watching, and the vast majority of communication studies on games focused on violent/addictive effects of games. No wonder some governments have attempted regulation or implemented regulations for online games.

Communication studies found negative effects of entertainment on participation. However, the results presented in this dissertation suggest encouraging results regarding the social role of gaming as well as the positive social role of gamers in terms of games providing a sense of community and political action. As opposed to governmental, understandable but unwarranted anxieties, game play hours actually have positive impacts on participation. Some game genres, such as RAS (RPRs, AOS, and Strategy) and AR, promote various participatory behaviors, and communication via in-game quest or game community mobilizes gamers in sociopolitical action. Game communities may serve as public spheres where gamers communicate not only about game topics but also diverse social issues. This community involvement and psychological attachment to community ultimately leads gamers to engage in participatory behaviors. Moreover, gamers not only participate for the sake of their own interest (in the case of gamer participation), but they also engage in various civic and political activities. As the theory of new media suggested, online communities, with the help of emerging digital technology, supersede previous formal organizations, and alternative forms of media, such as webzine, in-game quest, or game community, operate as traditional media for information sources of surveillance and mobilization for further social action.

As stated, game playing has social consequences in community building. Previous studies examined the learning or civic effects of game playing, arguing that gamers learn via socializing with other members and creating social norms for interaction that form the foundation of online communities. Such socialization and community building is related to the nature of game play. Participation in game cultures foster efficacy of learning and collaboration. Moreover, the unique environment of game playing allows gamers to experience real-world political structures. For instance, in MMOPRGs, as guild size exceeds that which can be organized by an individual player, guild members require formal organizational practices that necessarily reflect traditional political systems/structures. Gamers in such guilds experience democratic processes such as participating in elections or public discourse. Games, especially multiplayer games, are microcosms of society. In addition to the effects of gaming as learning or community building, the current study goes one step further on role of games. As an extension of the social ramifications of gaming, this study provides empirical findings that game practices, especially the community building that is part of prolonged participation in games, lead to sociopolitical consequences among gamers.

There is a dearth of communication studies on the political functions of game communities; research on the educational role of gaming (gamification) is limited to the area of education or pedagogy; and gaming's positive effects are limited to fitness in health communication. As this dissertation shows, gamers tend to use media for surveillance purposes and game communities serve as a public sphere, fostering active communication. Because game playing enhances perceived political learning, gaming ultimately encourages democratic citizenship. Specifically, discussion about game regulation issues and information seeking and expression during in-game activities antecedes various participatory behaviors.

Game community involvement was a critical contributor to participation. This result reminds us of the role of talk/discussion and associational membership on participation in political communication. In this regard, this dissertation expands the communicative role of issue-specific subject on participation and demonstrates that game studies can be an important part of political communication.

Additionally, our gamer's communicative ecology has expanded the field of communicative ecology with empirical data and statistical analysis. One contribution of the current study is the subject matter: The current study explored not only existing media outlets but also gamers' unique communication channels, including in-game quests and online game forum/communities. By analyzing gamer's communicative ecology as well as the dynamics between technological, social, and discursive layers, the sociopolitical roles of these layers were examined. More importantly, the methodology of the current study contributes to communicative ecology: While the majority of studies on communicative ecology are based on qualitative methodologies, especially ethnographic approaches, the current study employed statistical techniques that offer a fresh perspective.

Building further, the concept of gamer's communicative ecology was applied to the communication mediation model. This model offered an in-depth understanding of various interactions among variables that have not been previously explored: such interaction include the role of game genre on media use, discussion, and participation as well as gamer's communicative ecology on learning effects or the role of game related media as information sources for surveillance. Most significantly, by employing the communication mediation model, current research found that gamer communities performed as a networked public sphere and mobilizing platform for gamers.

Though this study conducted a cross-sectional survey, not a longitudinal or comparative design, analyzing actual gamers in the national sample and our analytical approach of considering the organizational level on a politicized game regulation issue guided us to research *why* and *how* citizens behaved in a certain way towards a particular governmental policy and are mobilized to take part in participatory behavior, as well as the dynamics between organizations and actors. In addition, this study allows us to examine previously unexplored aspects of gamers' political role and the dynamics of institutional intervention in both the regulation and mobilization process, while promising an ideal role of games as new social media. Moreover, the role of emotional aspects, psychological attachment and perceived identity, in the mobilizing process provides new insights on the theory of social capital.

The theory of media effects, a communication mediation model, media ecology and new media (democratic potential of new media technology) was combined and expanded in the dissertation. Therefore, the theoretical approach used in this study allows us to capture the complexity of gamers' communicative ecology and gamers' social roles, and significantly contribute to various area of academic research.

While the media effects in communication studies either explore: a) relationship between media contents and its impacts on public opinion (agenda-setting, framing or priming) or b) media's predictive role on interpersonal communication or participation, very few studies analyze a) and b) together, and in case of b), most of the studies suppose the dependence of media effects on the survey questionnaire. Nevertheless, this study offers a complex media discourse as in-depth socio-political contexts surrounding game regulatory issues and explains to what extent media are biased, and the influence of such biased media contents on the public opinion of gamers. Not only measuring media bias or media effects via survey questionnaire, this

study additionally investigates a complex dynamic between real politics and ideologically different media, and the effect of media discourse on gamers' attitude and behaviors.

More specifically, the roles of general media usage, game issue-specified media exposure, and its impacts on game discussion, community/learning and social action are explored, because media usage (or media discourse) and interpersonal communication are significant components of gamers' communicative ecology. Media is an information source for game issues and constructing/affecting public views on games, gamers, and effects of game playing. Since I argue that the reality of media – created by the interplay between elites and a media organization – reflects the social reality, gamers are situated or largely influenced by media/social reality that shows the negative notion of games. By applying media discourse to the gamers' communicative ecology, this study offers the mechanism of gamers' participatory behaviors (e.g. corrective action against media bias/hostility or mobilizing role of proattitudinal information), civic/social/learning roles of games/game playing that develops artificially addictive or violent games, game discussion/gamers community as the antithesis of the negative notion of media discourse, communication studies (games/game playing as violence/addiction), and policy of the Korean government. Moreover, the findings of the study show that game and game activities realize gamers' civic/political behaviors; game community that functions as a cross-section of an individual communication network, operates as a civic or political building platform, and facilitates the interaction of individual gamers and communication in game community, has become an integral part of the organizational structure to encourage gamers for further action.

This study regards sociopolitical participatory behavior as the cornerstone of political citizenship. Yet, participation may not be the only condition to be a social actor. As I consider

expression or discussion as antecedents of participation, information sharing, expressing opinion, engaging in public discourse, and community activities that games and interactions via game playing offer that result in sociopolitical action. In this respect, games are a social simulator that allows sociopolitical experience and such experience may transfer to real-life consequences. Thus, by participating in gaming, gamers become politically aware and ultimately may become social actors.

The research in the area of games lacks some information and depth. Different researchers show different outcomes on these issues, leading to increasing controversy in the field. While an (online) game's typology is another conceptual question, the primary activity of game playing might be social interaction that includes building and participating in a democratic community; the actual game playing might be a secondary issue. Whether games represent a normatively good technology for community building and political engagement or not, depends on the specific ways in which individuals use new technologies.

Researchers are just starting to understand the positive potential of gaming, and the potential to promote democratic citizenship may be the least well understood of all. Ultimately, it is worthwhile to explore gaming not only for entertainment or acquisition of traditional subject matters but also who we want to be – as individuals and as a collective whole: the very definition of society.

Members of Generation X and even Millennials might be lost generations politically. While there are many positive signs to be highlighted in recent national elections as well as grassroots movements on the local level, overall participation and desire to participate in political processes remains low for young adults. However, newer generations can potentially be deeply encouraged to engage in the political process by gaining practice through gaming. Unlike

previous generations that may be jaded by failed attempts to participate in politics over the past two or three decades, younger individuals can have success either through gaming directly or indirectly through interactions with new media. Also, we should not be so quick to dismiss the role of new media and online communities (including gaming forums) that does result in action.

Though the lifecycle effect is still an important factor in voting, I believe that the generational effect played a significant role in the previous three presidential elections in Korea. Based on the voting rate (from 2002 to 2017 in three presidential elections), the so-called game generation, who are now in their 30s to 40s, increasingly participate in voting. When the game shut down law was implemented in 2004, younger group of the game generation, who did not have the right to vote in the 17th president's election (2007), voted in high numbers; compared to previous voting rates for those in their 20s, in the 19th president's election (2017), voter turnout among those in their 20s has dramatically increased. Moreover, the voting rate of those who were by then in their 30s also increased, compared to when they were in their 20s. Based on this voting results, I do not argue that game playing or the issue of game regulation led them to vote more, but, this voting rate clearly suggests that the game generation, who values community involvement, trust in other members, and awareness of political issues, increasingly votes more and more.

Finally, the result of this dissertation suggests many important policy implications. Most of all, depending on the type of game genre and participation of gaming community activities, the games that are the target of regulation may actually contribute to various positive impacts on learning and democratic citizenship. While this study mainly focused on participatory aspects of games, I do not argue that game playing may not have negative experiences for a limited number of people. For a small percentage, excessive game playing is detrimental. Further research into

all aspects of gaming would provide meaningful information to assist parents, schools, and government health agencies in creating guidelines that promote prosocial gaming while allowing for intervention when gaming has become a negative issue for a particular individual.

Regarding policy campaigns to prevent excessive game playing, this dissertation offers in-depth insights into behavior characteristics of gamers. For instance, compared to the AR or SPW genre, RAS players are multifaceted gamers who tend to consider various aspects both inside and outside of game play. I defined AR players as egocentric self-experienced players who value actual participation. Policymakers should consider the unique characteristics of the game genre and game players. In addition, as this study suggests, policymakers or those who design campaigns, should understand that players of each genre have unique media consumption, networking, and interpersonal communication patterns. An identical approach of campaign or policy may not work in a complex gaming ecology. Thus, policymakers should deeply understand the nature of games, gaming activities, and gamer communicative ecologies to effectively prevent negative game behavior.

This study shows how game regulatory issues or politicized game issues operate as a political opportunity (or political instrument) for gamers' social behaviors. Such gamers' socio-political behavior has influenced the direction of the regulatory policy in Korea. In this regard, the current study conveys significant practical messages to policy makers. Until now, game policy was based on the separation between game generation and non-game generation. However, currently, gamers outnumber non-gamers and the scale of game industry grows exponentially. As this study suggested, without understating the implication of gamers' political influences on policy, current practices of policy makers or government officials will end up in empty talks and rather create unnecessary regulation, consequently leading to an increase in

social costs.

Thus, this dissertation proposes serious recommendations based on empirical data for academia and policymakers in the Korean government. Various political roles of games can be studied under the theory and methodology that traditional communication studies have offered. While communication studies that examined the negative effects of games have significant value on preventing negative outcomes, some studies seem to be designed for the purpose of denouncing gaming and thus overestimate harmful effects. Instead of presuming only negative effects, academia should study gaming more closely to discover ways to minimize negative potentials, while maximizing the value of games. In addition, the Korean government should take the results of this study into account when creating policy, namely that there is, indeed, evidence that gaming contributes various positive impacts on learning and democratic citizenship.

Limitations and future studies

This study has limitations that will be addressed here. First of all, the design of the study and case that I chose should be mentioned. Game regulation in Korea was selected as the case study to understand: (1) the relationships among individuals, organization, media and the political elites surrounding game regulation; (2) the influence of media on public perceptions; and (3) gamer participation as an effect of game playing. My rationale for choosing this particular game case was threefold.

First is that Korea is the ideal place for studying games and issue of game regulation. While close to 80% of the population plays games as part of a USD 10B game industry, according to the Ministry of Health (2014) 680,000 people are addicted to games. Korea is well known for forceful game regulation and the issue of game violence and addiction is one of

important public discourse. Though regulating games is a unique case in Korea, gaming is a global focus of sensational media stories of violence and addiction; thus, the results of this study have implications beyond Korea.

Second is that, since the public attitude toward game issues tends to align with media's representation under the political context that power elites strongly influence media, this case can be expanded to the media effect paradigm of communication studies. A third, by providing empirical evidence on the significant relationship between game playing activities and participatory behaviors, extends the subject of game studies beyond the notion of violence/addiction vs. education/fitness.

Regarding study design, I conducted news content analysis and online surveys using a national sampling method. There is a limitation to these methodologies; the limitation of cross-sectional data of survey and 10-years period of news contents analysis. To explore the impact of media on public perception, I analyzed news contents and linked the results of content analysis to the survey data. The cross-sectional survey (2016) cannot trace and capture the changing aspects of news contents (2004 to 2015); therefore, the survey data would not reflect the impact of frames and sources that have changed over the period. While I analyzed how frames and sources changes over the two periods, I measured public opinion only once, rendering impossible the ability to measure the influence of these transition. Moreover, the method of cross-sectional survey cannot control for all the complex aspects of political circumstances, e.g. modification of policy due to the changes in the government, and thus additional analysis is needed to fully capture the influence of political elites and administrators in different Ministries on game issues.

In conducting the news content analysis, I focused on salience of frames and sources, particularly emphasizing a pre-fixed set of logic or arguments. Yet, the technique that I applied,

which depend on counts, was not able to fully explain complex dynamics of issue development. According to Baumgartner et al. (2004), “counts alone cannot capture the complex workings of issue-definition,” and they suggest resonance as well as new methodological techniques should be concerned (p. 2). Yet, despite the methodological weaknesses, the content analysis that I offered allows insight to help understand the current issue more thoroughly. Since regulating games is an under explored area of concern, I initially designed the content analysis chapter to provide an in-depth introduction of the relationship among various actors surrounding game regulation in the Korean context that could be used to understand public opinion data.

Game issues may be challenging to find an explanatory model to clarify complex dynamics in games. Although game industry grows rapidly and its economic value is widely discussed, games as an area for academic research is rather new to the communication studies. As opposed to the topics in political communication studies, such as tax, abortion, energy, economy, or foreign policy in the US, regulatory game issues or gamers’ social behaviors have not been widely analyzed. Since this issue has been scarcely researched, media’s ambivalent position on the regulation versus responsibility of game-related social problems, and unestablished political party position (conservatism versus liberalism) on regulation, it is difficult to analyze game issues with the existing theories or explanatory mechanism of ideological disparity.

For instance, politically liberal groups who supposed to support liberal policy (opposition of regulation) have a tendency to support game regulation if they have children under the target age of regulation or who are susceptible to play games excessively. Likewise, those who value individual freedom (liberalism) have experienced ideological dissonance due to the protection of their children (conservatism) from potential negative impacts of game playing. Thus, the

relationship between realpolitik and ideological tendency surrounding game issues is more complex than bipartisan politics (consistency in partisan alignments) in the US context.

There might be a gap between media discourse and gamers' social or participatory behaviors, because this study did not analyze the contents of gamers' public discourse. In regard to the relationship between media discourse and gamers' social/participatory behaviors, the study should to be analyzed in the following order: a) the impact of government regulation on public discourse of media, b) the subjects or contents of public discourse, and c) the role of public discourse in mobilization. However, the current study is mainly designed to explore and underline the aspects of gamers' behavior as an antithesis of what mainstream media and government policy makers disregard in terms of games and game playing. Though the contents of public discourse were not analyzed, it can be inferred that game community operates as the public sphere that encourages gamers for further action, based on the study results that game community is positively related to participatory behaviors.

There is a possibility that game study under the traditional model of communication mediation may not be able to capture the newly emerging mechanism or the role of interpersonal communication on news creation. In contrast to the traditional model, Shah and his colleagues (2017) proposed a revised communication mediation model. They suggested the existence of a new reciprocal relationship between media and expression or participation, in which the perspectives of the receiver serve as the sources/drivers of news (Gruszczynski & Wagner, 2016) due to the chaining communication environment. Yet, this study applies a traditional communication mediation model and the idea of strong media effects models in Korean contexts as a theoretical and methodological approach to analyze a complex dynamics of gamers' communicative ecology and its role in socio-political activity. Thus, as Shah and his colleagues

(2017) suggested, future study needs to develop new relationship between media and communication/participation, and further investigate a role of audience or gamer's communication as potential driver of news media.

For future research, I need to develop more comprehensive measurements to apprehend the educational aspects of game playing. In the dissertation, I operationalize game learning based on the perceived effect of game playing. This perceived learning effect was only statistically significant in predicting online participation; this may be because adults, the sample in the current study, have experiences in sociopolitical learning other than game playing, most likely by formal education or socialization. This result might be either the limitation of the measurement or the nature of the predicting power of perceived game learning on participation. If the latter is the case, it is plausible that perceived learning may not lead to offline and institutional participation. The threshold of perceived game learning is not strong enough to engage in offline participation. However, if the former is the case I should develop a broader measure to assess different aspects of game learning.

In addition, I inferred the role of game genre on participation and game players' political behavior based on my own interpretation. While the results that discussion and community involvement (which was related to game playing activities and are critical to gamer social behavior) were explained by theory of communication studies, the significant contribution of the AR genre on various participatory behaviors was based on inference from the data of regression analysis. Due to the lack of literature on the political aspects of gaming, future studies are needed to develop the theoretical underpinnings on the role of game genre, especially examining why only the AR genre both directly and indirectly affects various social action. Though player attribution of psychological factors, such as motivation or emotional status, or subsidiary effects

of game playing are important, game genre's unique contribution on social engagement needs to be focused on in communication studies.

In future projects, I will collect data from different countries in order to make cross-national comparisons using gamer's communicative ecology and game community that the current study has applied. Although game regulation is a unique phenomenon in Korea, game playing and community involvement is not. With refined measures of gamer's communicative ecology and community activities, as well as new measures of interrelated reasoning (R) in the extended communication mediation model (O-S-R-O-R), the new project will be developed towards a more comprehensive model of gamer participation.

Addressing cross-national difference or cross-cultural aspects, it will be interesting to research why preference of game genre or platform is different between players in Asian countries and the US. While US game play is rapidly evolving from console to online play, Asian game players are far ahead in this aspect. As this dissertation suggested that players of each game genre have unique characteristics, whether these characteristics are constructed by culture or inherent aspects of genre will be interesting research subject.

Future projects will involve the new phenomenon of e-sports: its social impacts and as an extension of gamer's communicative ecology. While the current study operationalized a gamer based on recent gaming experience, currently non-gamers who regularly watch e-sports may regard themselves as gamers or at least gaming enthusiasts. E-sport as a channel of information and network building will likely increase in importance as a component of gamer's communicative ecology.

In the new broadcast media environment, recent programs have adopted the interactive communication platform that games have offered. For instance, fact-checking in the latest

televised presidential debates and an interactive messaging on the debates actually originated from the RAS genre (in-game quest interaction based on instant chatting). Entertainment programs also use this platform. New way of interaction between audiences and performers as well as interaction among audiences is possible. With the application of game features, mass media has evolved, converging into new media. Consequently, the line between mass media and online media has blurred, and the notion of passive audience in traditional mass media environment should be reconsidered in a new era of active audience participation.

Thus, game effects and implication of games should not be limited to gamification or violence/addiction. Games have influenced the way we communicate, the way we accumulate experience and consume media, and the way we participate in social action. As the trend of mobile apps indicates, the effects of gaming phenomenon can be expanded to everyday life. Examining the sociopolitical nature of games in the current study is only a start, and I am confident that the efforts of this study are an important step to better understanding games, gamers, and various issues surrounding the future of game play.

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Appendixes

Appendix 1- Descriptive statistics for key variables on Gamers population

Variables	M	S.D	Min	Max	Reliability
Age	38.7	38.7	20	59	
Education	3.88	3.88	1	5	
Income	3.22	3.22	1	7	
Gender (female=2)	1.44	1.44	1	2	
Game play hour	2.96	.96	1	5	
Interests in game issues	4.54	2.30	0	10	
Ideology	-.07	2.06	-5	5	
Conservative newspaper	1.72	1.43	0	5	
Moderate newspaper	1.93	1.30	0	5	.70 ^b
Webzine	1.19	1.28	0	5	
Traditional media	1.95	1.09	0	5	.67 ^a
Online media	2.92	1.32	0	5	.60 ^b
In-game media	1.36	1.29	0	5	.77 ^b
Support game regulation	-.04	.268	-5	5	
Frame of regulation support	3.14	1.45	0	5	.87 ^b
Frame of regulation opposition	2.71	1.14	0	5	.80 ^a
Institution rating	-.33	.50	-1	1	.74 ^a
Negative views on games	2.84	.87	1	5	.79 ^a
RAS	1.08	1.24	0	5	.75 ^a
AR	2.09	1.80	0	5	
SPW	.59	1.14	0	5	
Game co-playing	.97	.97	0	4	.48 ^b
Discussion of game issue	2.25	1.24	0	5	
Game community involvement	.12	.27	0	1	.40 ^b
Game community sense of belonging	.24	.35	0	1	.74 ^a
Gamer Self-identification	.20	.40	0	1	
Trust in gamers	4.35	2.06	0	10	.75 ^b
Perceived learning by playing games	1.43	.133	0	5	
Political knowledge	.46	.22	0	5	.32 ^a
Gamer participation	.12	.23	0	1	.70 ^a
Online participation	1.19	1.05	0	5	.92 ^a
Civic participation	.24	.31	0	5	.58 ^a
Political participation	.24	.20	0	5	.60 ^a

a Cronbachs alpha; b Correlation.

Appendixes 2- Question wording and variable coding

The original questionnaires are in Korean.

Items that were used in this dissertation have been translated by the authors as follows:

[Gender] Male (1) Female (2)

[Age] What is your age as of your last birthday? ____

[Education] What is the highest educational level you have attained?

[Income] In what range would you estimate the annual household income of this household (before taxation)?

[Children] Do you have children?

Yes, I have children under 16 years old

Yes, I have children whose age from 17 to 19 years

Yes, all of my children are adult (over 20 years old)

No (go to #71)

[Ideology] On a scale where 5 is the center, 0 - left and 10 - right, indicate your own political ideology.

[Game play hour] Currently (after October 2015), per day on average how many hours do you play games?

I do not play games

Less than 1 hour

Between 1 and 2 hours

Between 2 and 3 hours

More than 3 hours

[Interest in game issues] How interested would you say you are in the game-related issue (e.g.

game regulation/policy, game-related social problems)? (1 – not interest at all, 10 - very interested)

[Ideologically different media-Conservative news] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you read the following news media:

Conservative newspaper (e.g. *Chosun*, *Joongang*, *Donga*)

[Ideologically different media-Moderate news] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you read the following news media:

Liberal newspaper (e.g. *Hankyoreh*, *Kyunghyang*)

Moderate newspaper (e.g. *Hankook*, *Kookmin*, *Seoul*, *Segye*)

[Ideologically different media-Webzine] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you read the following news media:

Webzine (e.g. *Blotter*, *ZDNet*, *Game Mecca*, *Thisisagame.com*).

[Game news exposure-Mass media] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often did you read, watch or listen to the following channel, regarding the topic of game violence/addiction and game regulation?

Radio

Newspapers

Television

[Game news exposure-Online media] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often did you read, watch or listen to the following channel, regarding the topic of game violence/addiction and game regulation?

Internet

Social media

[Game news exposure-In-game media] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often did you read, watch or listen to the following channel, regarding the topic of game violence/addiction and game regulation?

In-game quest

Online forum (game community)

[Support game regulation] Currently, two game regulation tools are implemented. Using scale from 0 - “fully oppose,” to 5 - “moderate,” to 10 - “fully support,” how do you support or oppose the overall game regulation, game shutdown and selective game shutdown?

Overall game regulation: 0 to 10;

[Frames that support regulation] Do you agree or disagree with the following statements?

(5Q) 0: totally disagree, 5: totally agree:

Government-led game regulation is necessary to protect youth.

Government-led game regulation is necessary to prevent (game-related) social problems.

[Frames that oppose regulation] Do you agree or disagree with the following statements? (5Q)

0: totally disagree, 5: totally agree:

Government-led game regulation violates gamers’ personal freedom.

Government-led game regulation disregards potential for games as cultural contents.

Government-led game regulation is not effective.

[Negative views on games] When you think about games, which words come to mind? (from left (1) to right (5))

Addiction ----- Leisure/Hobby

Violence ----- Social

Gambling ----- Art/Culture

[Institution evaluation] Rate the following institutions based on their position in game regulation: (1: Dislike-2: Neutral-3: Like)

Ministry of Science, ICT and Future Planning

Ministry of Culture, Sports and Tourism

Ministry of Health and Welfare

Ministry of the Gender Equality & Family

[Game genre-RAS] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you play each genre of games?

RPGs (e.g. MMORPGs, Lineage, World of Warcraft, Maple story)

AOS (e.g. League of Legend, Heroes of the Storm)

Strategy (e.g. Civilization, SimCity, Football Manager)

[Game genre-AR] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you play each genre of games?

Augmented Reality (e.g. Pokémon go)

[Game genre- SPW] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you play each genre of games?

SNG/Puzzle/Web board (e.g. Clash of Clans, Kakao Mahjong, Net marble, Baduk)

[Game co-playing]

How many of them do you play with?

Random encounters (in quest) _____

Online friends _____

Offline friends _____

If you have been/are a guild member, with how many other guild members do you play (if you are a member of more than 1 guild, tell us an average number)? _____

[Discussion of game issues] Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you talk/discuss the issue of game regulation?

[Game community-Involvement] The following is a list of some online game activities. Please indicate whether those apply to you in a yes/no form:

I frequently write posts online about the games I play. Yes (1), No (0)

I frequently read or visit websites and forums related to the games I play. Yes (1), No (0)

[Game community-Belong] The following is a list of some online game activities. Please indicate whether those apply to you in a yes/no form:

I feel close to the game community Yes (1), No (0)

I feel close to the people I play games with. Yes (1), No (0)

I have offline relationships with the people I game with. Yes (1), No (0)

[Gamer Self-identification] Some people use the term “gamer” to describe themselves as a fan of gaming or a frequent game-player. Do you think the term “gamer” describes you well, or not?

Yes, gamer

No, not gamer

Don't know

[Trust in gamers]

On a scale where 0 is “least likely” and 10 is “most likely,” indicate how much do you think the guild members are trustworthy?

On a scale where 0 is “least likely” and 10 is “most likely,” indicate how much do you think other gamers are trustworthy.

[Perceived game learning by playing games] Read each question below and answer how much do you agree or disagree with the following statements? (0: totally disagree, 5: totally agree)

Through games, I have a chance to learn about socio-political system/structure.

Through games, I come to know a new world that I have not noticed before.

[Political Knowledge]

Who is the current prime minister?

Which is the ruling party?

Who is the minister of justice?

How many judges are there in the Supreme Court, including the Chief Justice?

When defining an electoral district, what is the maximum ratio of population on a large electoral district to a smaller district?

[Gamer's participation] Please indicate if you have done any of them in the last twelve (12) months. Have you participated in the following activities? Yes (1) or No (0)

Signed a petition for or against game regulations (both online and offline petition)

Fought a war for or against guild or allays for political reasons (e.g. class issue or distribution of game items)

Stopped playing games or withdrew from games that excessively regulated game playing

Voted for or against candidates, who supported or opposed games and game-playing.

[Online participation] Using a scale from 0 to 5, where 0 means never and 5 very frequently.

How frequently do you do the following online activities (including SNSs, Internet via laptop/smart media)?

Comment current events and politics

Seek Government Information

Discuss the news and opinion columns that appear in the online media

Participate in online discussion forums

Sign up to volunteer for a social or political campaign

Support political protests

Mobilize your contacts around social or political causes

Express your opinion on social and political issues

[Civic participation] Please, indicate if you have done any of them in the last twelve (12) months. Of course we know that people have many others things to do in their daily lives, so many people do not have time to do any of the activities. Yes (1), No (0)

Donated money or other objects to a group that does social or environmental work

Done volunteer work

Worked in a community project

[Political participation] Please, indicate if you have done any of them in the last twelve (12) months. Of course we know that people have many others things to do in their daily lives, so many people do not have time to do any of the activities. Yes (1), No (0)

Attended a political rally

Attended a public meeting of your city

Signed a petition

Send message or leave comments in a live radio or television show to express your opinion

Attended a social or political protest

Voting

Appendixes 3- Online Survey Questionnaires

SQ1. Male (1) Female (2)

SQ2. What is your age as of your last birthday? ____

SQ3. Age range

SQ4. Where do you live? Seoul

- a. Gyeonggi-do
- b. Gangwon-do
- c. Chungcheong-do
- d. Gyeongsang-do
- e. Jeollado-do
- f. Jeju-do

SQ5. Consent

1. Currently (after October 2015), per day on average how many hours do you play games?

- a. I do not play games
- b. Less than 1 hour
- c. Between 1 and 2 hours
- d. Between 2 and 3 hours
- e. More than 3 hours

2. How about your previous game playing. How many hours per day did you play games during adolescence?

- a. I did not play games
- b. Less than 1 hour
- c. Between 1 and 2 hours
- d. Between 2 and 3 hours
- e. More than 3 hours

3. On average how much money do you spend or spent playing games per month?

- a. Less than 10,000
- b. 10,000~ 30,000
- c. 30,000~50,000
- d. 50,000~100,000
- e. 100,000~150,000
- f. More than 150,000

4. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you play each genre of games?

- a. RPGs (e.g. MMORPGs, Lineage, World of Warcraft, Maple story)
- b. AOS (e.g. League of Legend, Heroes of the Storm)
- c. Action/FPS/TPS (e.g. GAT, Overwatch, Sudden Attack, Call of duty)
- d. Strategy (e.g. Civilization, SimCity, Football Manager)
- e. SNG/Puzzle/Web board (e.g. Clash of Clans, Kakao Mahjong, Net marble, Baduk)
- f. Augmented Reality (e.g. Pokémon go)

5. What was your most played game genre in adolescence?

- a. RPGs (e.g. MMORPGs, Lineage, World of Warcraft, Maple story)
- b. AOS (e.g. League of Legend, Heroes of the Storm)
- c. Action/FPS/TPS (e.g. GAT, Overwatch, Sudden Attack, Call of duty)
- d. Strategy (e.g. Civilization, SimCity, Football Manager)
- e. SNG/Puzzle/Web board (e.g. Clash of Clans, Kakao Mahjong, Net marble, Baduk)
- f. Augmented Reality (e.g. Pokémon go)

6~8. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might affect yourself, others, and children in terms of aggressive behaviors.

RPGs (e.g. MMORPGs, Lineage, World of Warcraft, Maple story)
 AOS (e.g. League of Legend, Heroes of the Storm)
 Action/FPS/TPS (e.g. GAT, Overwatch, Sudden Attack, Call of duty)
 Strategy (e.g. Civilization, SimCity, Football Manager)
 SNG/Puzzle/Web board (e.g. Clash of Clans, Kakao Mahjong, Net marble, Baduk)
 Augmented Reality (e.g. Pokémon Go)

6. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might affect **yourself** in terms of aggressive behaviors.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5
Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

7. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might affect **others** in terms of aggressive behaviors.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5
Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

8. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might affect **children** in terms of aggressive behaviors.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5

Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

9~11. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might contribute to addiction by yourself, others, and children.

9. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might contribute to addiction by **yourself**.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5
Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

10. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might contribute to addiction by **others**.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5
Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

11. Using scale from 0 – “Not affected” to 5 - “strongly affected,” assess whether playing the following game genres might contribute to addiction by **children**.

RPGs	0	1	2	3	4	5
AOS	0	1	2	3	4	5
Action/FPS/TPS	0	1	2	3	4	5
Strategy	0	1	2	3	4	5
SNG/Puzzle/Web board	0	1	2	3	4	5
AR	0	1	2	3	4	5

(Gamer only #12~14: except #1 is a and 2 is a)

12. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, when you play games, which platforms do you use?

- a. PC or Laptop
- b. Mobile media (Smartphone, tablet)
- c. Console (PlayStation, Xbox or Nintendo)

13. Who do you play with most? (Regular game player)

- a. Alone
- b. Random encounters (in-quest/game)
- c. Online friends (acquaintance while I play games. e.g. friends' friends whom I only met online)
- d. Guild members
- a. Offline friends (e.g. friends, neighbors, school mates, or colleagues)

14. How many of them do you play with?

- a. Random encounters (in quest) _____
- b. Online friends _____
- c. Offline friends _____

15. If you have been/are a guild member, with how many other guild members do you play (if you are a member of more than 1 guild, tell us an average number)?

16. Read each question below and answer how much do you agree or disagree with the following statements? (0: totally disagree, 5: totally agree)

- a. Due to games, I became estranged from my friends and family.
- b. Through games, I have a chance to learn about socio-political system/structure.
- c. Although games negatively affect my studying/job, I find myself still playing games.
- d. I have reduced sleep hours to play games.
- e. Through games, I come to know a new world that I have not noticed before.
- f. I use games to escape negative mood.
- g. Through games, I have new people/friends to trust and share emotions.

17. For each of the statements below, please indicate to what extent the statement is characteristic of you. (0 = not at all like you, 5 = very much like you)

- a. It's enough for me that something gets the job done; I don't care how or why it works
- b. I really enjoy a task that involves coming up with new solutions to problems
- c. Learning new ways to think doesn't excite me very much
- d. I only think as hard as I have to
- e. I find satisfaction deliberating long and hard for hours

18. How much do you know about the following terms (regulation and term)?

	Know about in detail	Briefly Know	Only know the name	Do Not Know
Game Shutdown				
Selective Game Shutdown				
Fatigue System				
Game Addiction Law				
Internet Addiction/Mobile Addiction				

19. Which political party proposed the Game Addiction Bill?
 - a. Saenuri Party
 - b. The Minjoo
 - c. Democratic Labor Party
 - d. Justice 21
 - e. People Party 21
20. Select all the politicians who opposed the Game addiction law?
 - a. Kim Gwangjin
 - b. Kim Sangmin
 - c. Nam Gyeongpil
 - d. Shin Uijin
 - e. Son Inchun
21. Who is the president of E-Sport Association?
 - a. Kim Sangmin
 - b. Nam Gyeongpil
 - c. Jeon Byeong Heon
 - d. Lim Yohan
 - e. Hong Jinho
22. Select the clauses that are included in the Game Shut Down Law.
 - a. Target children under age 19
 - b. Block online game access between midnight and 6 am
 - c. Impose a penalty on 15% of game company's sales
 - d. In 2011, the Constitutional Petition has decided the bill was illegal (7: illegal, 2: legal)
 - e. Illegally distributed games from foreign servers are the target of the bill.
23. Select the institutions/associations that support Game Addiction Law.
 - a. Cultural Action
 - b. American Psychological Association
 - c. World Health Organization
 - d. I health net
 - e. People power 21
24. Select the clauses that are included in the Selective Game Shut Down Law.
 - a. Game companies are required to report children's playing time and expenditure on parent's request
 - b. Target children under age 17
 - c. National 100 popular games and educational games are subject to regulation
 - d. In order to access games, children do not need parent's authorization
 - e. Ministry of Health & Welfare has proposed the bill.
25. Who is the current prime minister?
 - a. Jeong Unchan
 - b. Lee Wangu
 - c. Kim Jongin
 - d. Hwang Gyoan
 - e. Han Myeongsuk

26. Which is the ruling party?
- The Minjoo
 - Saenuri Party
 - Democratic Labor Party
 - Justice 21
 - Green Party
27. Who is the minister of justice?
- Lee Cheolseong
 - Kim Hyeonung
 - Kim Sunam
 - Ahn Daehee
 - Kim Yeongran
28. How many judges are there in the Supreme Court, including the Chief Justice?
- 6
 - 7
 - 10
 - 13
 - 14
29. When defining an electoral district, what is the maximum ratio of population on a large electoral district to a smaller district?
- 1:1
 - 2:1
 - 3:1
 - 4:1
 - 5:1
30. Rate the following institutions based on their position in game regulation:
(1: Dislike-2: Neutral-3: Like)
- National Assembly
 - Ministry of Education
 - Ministry of Science, ICT and Future Planning
 - Ministry of Culture, Sports and Tourism
 - Ministry of Health and Welfare
 - Judiciary
 - Ministry of the Gender Equality & Family
 - The Blue House
31. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you talk/discuss the issue of game regulation?
32. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, whom did you talk with?
- Guild members
 - Coworkers
 - Family members
 - Random encounters (in-quest/game)
 - Online friends (including blogger or community member)

- c. Offline friends (e.g. friends from neighbors, schools, or works)

33. Thinking about people you comment the news with or talk to about politics including game regulation, and on a scale from 0 to 5, with 0 being never and 5 often, how often do you talk to people who:

- a. Have very different ideas from your own
- b. Are from the left
- c. Are from the right
- d. Are from a different social strata than you
- e. Are from a very different age than yours

34. Which channel or ways do you use to discuss game issues (from 0 to 5, with 0 being never and 5 very often)?

- a. In-game quest
- b. Online forum (game/guild community)
- c. Social media
- d. Mass media (comment the news or send the letter to the editor)
- e. Interpersonal communication (face to face conversation)

35. When you think about games, which words come to mind? (from left (1) to right (5))

- a. Addiction ----- Leisure/Hobby
- b. Violence ----- Social
- c. Gambling ----- Art/Culture

36. Do you agree or disagree with the following statements? (5Q) 0: totally disagree, 5: totally agree:

- a. The “intervention” of government on game regulation is legitimate.
- b. Game companies should pay social expenses (in regard to game addiction).
- c. Game regulation has a lot of influence on other gamers’ playing habits.
- d. Game regulation has a lot of influence on other people’s (non- gamers’) view on games and gamers

37. Do you agree or disagree with the following statements? (5Q) 0: totally disagree, 5: totally agree:

- a. Government-led game regulation is necessary to protect youth.
- b. Government-led game regulation is necessary to prevent (game-related) social problems.
- c. Government-led game regulation violates gamers’ personal freedom.
- d. Government-led game regulation disregards potential for games as cultural contents.
- e. Government-led game regulation is not effective.

38. Using a scale from 0 to 5, where 0 means not responsible and 5 highly responsible, which of the following is responsible for game addiction/overindulgence?

- a. Gamers
- b. Parents
- c. Game companies
- d. Politicians
- e. Political party
- f. Government
- g. Lack of play or entertainment infrastructure
- h. News Media

39. Sometimes, news articles blame games or gamers for school violence or other social problems (e.g. game addicted parent killed children). Using a scale from 0 to 5, where 0 means not responsible and 5 highly responsible, who is responsible for game-related social problems?

- a. Gamers
- b. Parents
- c. Game companies
- d. Politicians
- e. Political party
- f. Government
- g. Lack of play or entertainment infrastructure
- h. News Media

40. Do you agree or disagree with the following statements? (11Q)

(0: totally disagree, 5: totally agree)

- a. I think the majority of gamers oppose game regulation.
- b. I trust the information I see in the news regarding game regulation.
- c. News media's descriptions of game or gamers overemphasize negative aspects.
- d. The news media have a lot of influence on my own opinion on game regulation.
- e. The news media have a lot of influence on opinion of general public on game regulation.
- f. News media's descriptions of game or gamers accurately reflect gamers' characteristics.
- g. I think the majority of people regard gamers as an outsider or loner.
- h. I think the majority of people support game regulation.
- i. The news media have a lot of influence on other gamers' opinion on game regulation.
- j. The climate of opinion on news media reflects general public opinion on game regulation.

41. How often do you feel angry in response to media's coverage about game regulatory issues? (0 – Not at all, 10 - very often)

42. How often do you feel satisfied in response to media's coverage about game regulatory issues? (0 - Not at all, 10 - very often)

43. How often do you feel angry in response to media's coverage about game related social problems? (0 - Not at all, 10 - very often)

44. How often do you feel satisfied in response to media's coverage about game related social problems? (0 - Not at all, 10 - very often)

45. We would like to know your feelings towards some political groups on a scale from 0-10. For example, if you feel very favorable towards one of the listed, you can give it a high score up to 10; if you feel very unfavorable, you can give a low score down to 0 (zero); if you feel neutral towards it, you should give it a 5.

- a. Saenuri Party
- b. The Minjoo

46. Since 2011, the issue of game regulation has been widely discussed and received large amount of media attention. Moreover, politicians publicly announced their views/position on game issues; sometimes, politicians from each party support or oppose game regulation. Regarding the issue of game regulation, how did you feel towards the same political groups on a scale from 0-10.

- a. Saenuri Party
- b. The Minjoo

47. Currently, two game regulation tools are implemented. Using scale from 0 - “fully oppose,” to 5 - “moderate,” to 10 - “fully support,” how do you support or oppose the overall game regulation, game shutdown and selective game shutdown?
- Overall game regulation: 0 to 10;
 - Game shutdown: 0 to 10;
 - Selective game shutdown: 0 to 10.
48. Using scale from 0 - “negative” to 10 - “positive,” assess the effects of playing games on yourself.
49. Using scale from 0 - “negative” to 10 - “positive,” assess the effects of playing games on others.
50. Using scale from 0 - “negative” to 10 - “positive,” assess the effects of playing games on your child.
51. On a scale where 0 is “least likely” and 10 is “most likely,” indicate how much do you think the guild members are trustworthy?
52. On a scale where 0 is “least likely” and 10 is “most likely,” indicate how much do you think other gamers are trustworthy.
53. Some people use the term “gamer” to describe themselves as a fan of gaming or a frequent game-player. Do you think the term “gamer” describes you well, or not?
- Yes, gamer
 - No, not gamer
 - Don’t know
54. How interested would you say you are in the game-related issue (e.g. game regulation/policy, game-related social problems)? (1 – not interest at all, 10 - very interested)
55. Using a scale from 0 to 5, where 0 means never, and 5 means very frequently, how often do you read, watch or listen to the following media:
- Radio
 - Newspapers
 - Television
 - Internet
 - Social Media
56. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often did you read, watch or listen to the following channel, regarding the topic of game violence/addiction and game regulation?
- Radio
 - Newspapers
 - Television
 - Internet
 - Social media
 - In-game quest
 - Online forum (game community)
57. On a scale from 0 to 5, where 0 means none and 5 means a lot, how much attention did you pay to the following types of news?

- a. National political news
- b. Economy news
- c. Social news
- d. Culture and art news
- e. Entertainment and celebrity news

58. Using a scale from 0 to 5, where 0 means never and 5 means very frequently, how often do you read the following news media:

- a. Conservative newspaper (e.g. *Chosun, Joongang, Donga*)
- b. Liberal newspaper (e.g. *Hankyoreh, Kyunghyang*)
- c. Moderate newspaper (e.g. *Hankook, Kookmin, Seoul, Segye*)
- d. Webzine (e.g. *Blotter, ZDNet, Game Mecca, Thisisagame.com*).

59. In the past five years, have you changed your news media readership?

- a. I read more conservative newspapers (e.g. *Chosun, Joongang, Donga*)
- b. I read more liberal newspapers (e.g. *Hankyoreh, Kyunghyang*)
- c. I read more moderate newspapers (e.g. *Hankook, Kookmin, Seoul, Segye*)
- d. I read more webzine (e.g. *Blotter, ZDNet, Game Mecca, Thisisagame.com*)
- e. No change

60. Using a scale from 0 to 5, where 0 means never and 5 very frequently. How frequently do you do the following online activities (including SNSs, Internet via laptop/smart media)?

- a. Comment current events and politics
- b. Online gaming
- c. Seek Government Information
- d. Discuss the news and opinion columns that appear in the online media
- e. Participate in online discussion forums
- f. Sign up to volunteer for a social or political campaign
- g. Support political protests
- h. Mobilize your contacts around social or political causes
- i. Express your opinion on social and political issues

61. Using a scale from 0 to 5, where 0 means strongly disagree and 5 means strongly agree, how much do you agree or disagree with the following statements?

- a. Most people are honest
- b. I trust the information I see in the news
- c. Media has a lot of influence in the opinion of the people
- d. The media tend to present accurate information
- e. The climate of opinion on media reflects general public opinion
- f. In general terms, I am happy
- g. I think that in some years my live will be better than it is today

62. On a scale from 0 to 5, were 0 means not at all and 5 a lot, how interested are you in:

- a. Local or regional politics
- b. National politics
- c. International politics

63. Some people believe that they can have influence on political and community issues, while others believe that they don't really have much influence. Using a scale from 0 to 5, where 0 means total disagreement and 5 total agreement, how much do you agree or disagree with the following statements?

- a. People like me, can influence what local government does.
- b. I believe that the national government cares about what people like me think.
- c. City government responds to the initiatives of individuals.
- d. Sometimes government and politics are so complex that someone like me cannot really understand what is going on.

64. On a scale where 5 is the center, 0 - left and 10 - right, indicate the political ideology of mainstream media in Korea from your perspective.

65. On a scale where 5 is the center, 0 - left and 10 - right, indicate the political ideology of public opinion in Korea from your perspective.

66. On a scale where 5 is the center, 0 - left and 10 - right, indicate your own political ideology.

67. On a scale where 5 is neutral, 0 - negative and 10 - positive, indicate how much to negative or positive is public opinion on games from your perspective.

68. On a scale where 5 is neutral, 0 - negative and 10 - positive, indicate how much to negative or positive is public opinion on gamers from your perspective.

69. Please, indicate if you have done any of them in the last twelve (12) months. Of course we know that people have many others things to do in their daily lives, so many people do not have time to do any of the activities. Yes (1), No (0)

- a. Attended a political rally
- b. Attended a public meeting of your city
- c. Signed a petition
- d. Send message or leave comments in a live radio or television show to express your opinion
- e. Donated money or other objects to a group that does social or environmental work
- f. Attended a social or political protest
- g. Done volunteer work
- h. Worked in a community project
- i. Voting

70. Please indicate if you have done any of them in the last twelve (12) months. Have you participated in the following activities? Yes (1) or No (0)

- a. Signed a petition for or against game regulations (both online and offline petition)
- b. Fought a war for or against guild or allays for political reasons (e.g. class issue or distribution of game items)
- c. Stopped playing games or withdrew from games that excessively regulated game playing
- d. Voted for or against candidates, who supported or opposed games and game-playing.

71. Are you a member of the following organizations? Yes (1) No (0)

- a. Hobby/Religion organization (e.g. club, social, recreational or sports team, cultural organization)
- b. Political organization (e.g. political party or movement, union)
- c. Civic organization (e.g. environmental or ecological organization, human rights organization)

72. The following is a list of some online game activities. Please indicate whether those apply to you in a yes/no form:

- a. I feel close to the game community Yes (1), No (0)
- b. I frequently write posts online about the games I play. Yes (1), No (0)
- c. I frequently read or visit websites and forums related to the games I play. Yes (1), No (0)
- d. I feel close to the people I play games with. Yes (1), No (0)
- e. I have offline relationships with the people I game with. Yes (1), No (0)

73. Have you watched *My Little Television*? Yes (1) No (0)

74. How often do you watch “Africa TV”? (0: never, 5: Very often)

75. How familiar are you with an interactive chat system between television broadcasters and audiences of *My Little Television*? (0: not familiar at all, 10: very familiar)

Demographic information

DQ1. What is the highest educational level you have attained?

- a. Elementary school
- b. Middle school
- c. High school
- d. University (over 2-years program)
- e. Graduate

DQ2. In what range would you estimate the annual household income of this household (before taxation)?

- a. Less than 10,000,000 won
- b. Between 10,000,000 and 20,000,000
- c. Between 20,000,000 and 40,000,000
- d. Between 40,000,000 and 60,000,000
- e. Between 60,000,000 and 80,000,000
- f. Between 80,000,000 and 100,000,000
- g. More than 100,000,000

DQ3. Are you married? Yes (1) No (0)

DQ4. Do you have children?

- a. Yes, I have children under 16 years old
- b. Yes, I have children whose age from 17 to 19 years
- c. Yes, all of my children are adult (over 20 years old)
- d. No (go to #71)

DQ5. Do your children play online/mobile games?

- a. Yes
- b. No
- c. I do not know

DQ6. Do you know that parents can request children’s game playing records and expenditure from the game companies? Yes (1) No (0)

(Except #DQ4 is d) DQ7. Have you ever requested children's game playing records or expenditure from the game companies? Yes (1) No (0)

DQ8. Which political party do you support?

- a. Saenuri Party
- b. The Minjoo
- c. People Party 21
- d. Justice 21
- e. Democratic Labor Party
- f. I do not support any of political parties.

Appendixes 4- National population vs. Gamer

Gamer versus non-gamer: Media usage						
	Conservative news		Moderate news		Webzine	
	National	Gamer	National	Gamer	National	Gamer
Gender (male=1)	-.027	-.046	-.041	-.037	-.079	-.086
Age	.055	.068	.027	.025	-.074	-.069
Education	.075	.066	.099	.126	.019	.034
Income	.158	.137	.135	.116	.072	.056
Children	-.070	-.067	.008	.027	-.021	-.018
Game-related issue	.189	.216	.237	.262	.318	.343
Ideology	.216	.236	-.121	-.113	.001	-.006
Play hour	-.018	-.025	-.030	-.059	.164	.120
Total R ² (%)	11.7	17.1	11.7	13.4	18.5	16.9

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer: Media usage						
	Mass Media		Online Media		In-game	
	National	Gamer	National	Gamer	National	Gamer
Gender (male=1)	.047	.049	.050	.047	.049	.050
Age	.205	.208	.020	.205	.208	.020
Education	.026	.027	.058	.026	.027	.058
Income	.102	.086	.025	.102	.086	.025
Children	.034	.033	-.033	.034	.033	-.033
Game-related issue	.301	.312	.266	.301	.312	.266
Ideology	.096	.109	-.033	.096	.109	-.033
Play hour	-.012	-.051	.068	-.012	-.051	.068
Total R ² (%)	19.2	21.5	8.7	19.2	21.5	8.7

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer: Games

	Game Co-playing		Game Discussion		Community-involve	
	National	Gamer	National	Gamer	National	Gamer
Gender (male=1)	-.154	-.179	.029	.023	-.041	-.038
Age	-.213	-.211	.027	.018	-.071	-.071
Education	-.009	.001	.055	.063	.011	.023
Income	.056	.062	.085	.096	.021	.024
Children	-.030	-.044	.058	.058	-.014	-.012
Game-related issue	.099	.123	.422	.450	.174	.201
Ideology	.012	.001	.033	.040	.012	.008
Play hour	.436	.311	.122	.079	.250	.214
Total R ² (%)	36.1	24.3	24.3	25.6	13.4	11.2

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer: Games

	Community- Belong		Gamer self-identification		Trust in gamers	
	National	Gamer	National	Gamer	National	Gamer
Gender (male=1)	-.051	-.056	-.056	-.056	-.034	-.046
Age	-.079	-.066	-.065	-.084	-.026	-.027
Education	-.009	.003	.000	-.001	-.024	-.015
Income	.043	.037	.014	.002	.008	.003
Children	.023	.024	-.038	-.028	-.031	-.003
Game-related issue	.183	.209	.193	.198	.312	.320
Ideology	.007	.003	.023	.026	.052	.039
Play hour	.333	.272	.141	.113	.126	.132
Total R ² (%)	20.2	15.2	8.8	7.6	14.2	14.2

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer: Games

	Learning by game playing		Political Knowledge	
	National	Gamer	National	Gamer
Gender (male=1)	-.014	.003	-.103	-.101
Age	-.016	.018	.080	.077
Education	.032	.041	.042	.053
Income	.033	.014	.036	-.002
Children	.031	.019	-.038	-.012
Game-related issue	.267	.299	.006	.042
Ideology	.018	.020	-.073	-.081
Play hour	.415	.298	-.050	-.033
Total R ² (%)	30.3	20.3	3.1	2.7

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer: Participation

	Gamers' participation	
	National	Gamer
Gender (male=1)	.025	.025
Age	.026	.026
Education	.001	.021
Income	.067	.067
Children	-.020	-.027
Game-related issue	.191	.219
Ideology	.054	.068
Play hour	.162	.159
Total R ² (%)	8.3	9.4

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362

Gamer versus non-gamer:

Participation

	Online Participation		Civic Participation		Political Participation	
	National	Gamer	National	Gamer	National	Gamer
Gender (male=1)	-.029	-.011	.064	.079	.015	.038
Age	.025	.024	.094	.109	.066	.073
Education	.071	.096	.097	.132	.048	.056
Income	.102	.088	.112	.096	.080	.052
Children	.049	.066	-.023	-.033	.004	.028
Game-related issue	.350	.373	.184	.204	.164	.207
Ideology	-.044	-.024	-.006	.021	-.052	-.035
Play hour	.077	.042	.098	.074	.138	.106
Total R ² (%)	18.1	18.9	8.7	10.4	7.0	7.5

Entries are standardized regression coefficients;

Bold number indicates statistically significant: $p < .05$; National N = 1759; Gamer N = 1362