

An Analysis of Media Researchers' Perceptions of the Digitalization of Broadcasting in Korea

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Abstract

In Korea, researchers from universities and research institutions have exerted a significant role in planning, reviewing, and performing policy initiatives. This paper categorizes and assesses the perceptions of twenty-two researchers, whose areas are directly linked to digital cable television policy, technology, and industry. The subjectivity of digital television was examined from the perspective of social shaping of technology (SST), which is halfway between technological determinism and social determinism. Media researchers were asked to answer 36 Q-statements covering comprehensive dimensions about digital cable television. The result shows that the perceptions of participants fell into three types: (1) market-focused discontents, (2) public interest and broadcast supporters, and (3) regulation-oriented optimists. All three types agreed that the digitalization is a meaningful and important change for the cable industry and that the current regulation system in Korea must be revised to serve new developments in the field of media.

Key words: digitalization, cable television, subjectivity, policy elite, SST

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Introduction

A recent and salient trend in broadcast technology throughout the world is the digitalization of production, distribution, and signal delivery platforms for television and radio (Tadayoni et al., 2005). The introduction of *digital* television represents the most significant innovation since the advent of television itself. Digital broadcast delivery multiplies the number of channels available and transforms the nature of the television medium by making it interactive. The process of digitalization merges technologies used in broadcasting, computing, and telecommunications and offers the potential for a whole range of new applications, such as electronic retail services, Internet access, and pay-per-view options (Chalaby & Segell, 1999).

Over the next 10–20 years, it is expected that the current 1.4 billion analog TV sets in the world will be replaced by digital sets. Many countries have already started the transition from analog to digital television (Wu et al., 2007). Digital cable subscriber numbers in the United States came close to reaching the 35 million mark at the end of the second quarter of 2007, which represents a 30 percent increase in comparison to the second quarter of 2006 (National Cable and Telecommunications Association, 2007). Digital Terrestrial Television in many parts of Europe has turned into a free-to-air platform (Iosifidis, 2007). In Korea, digital broadcasting is expected to replace the terrestrial wave television by the year 2012 (Korean Broadcasting Commission, 2007). In preparation for this replacement, on July 1 of 2005, cable providers initiated digital cable broadcasting services as a pilot service. Beginning with digital broadcasting, VoIP (Voice over Internet Protocol), and data broadcasting, the digital cable

industry will gradually adopt ITV (Interactive Television) commercialization, TPS (Triple Play Services), QPS (Quad Play Services), and wireless cable services in the year 2009, and soon after, will launch “cable home networks” in Korean households (Kim, 2007).

In terms of technological advancement, the digitalization of broadcasting in Korea is currently considered to be at a mature stage. From the perspective of technological determinism which claims that the fundamental changes are driven by technological factors, ‘digital’ technology already became a critical factor in market competition in Korea by changing the environment that surrounds broadcasting services. However, social forces that adopt new technology should not be overlooked (Chalaby & Segell, 1999).

The discussion currently underway regarding the digital conversion of cable television not only deals the ways in which digital technology should change the broadcast environment of cable but also observes the various social factors involved in the digitalization drive. Hence, to explore the digitalization of Korean cable television, this paper reviews technological, social, political, economic, and cultural factors by evaluating the subjectivity of Korean telecommunication researchers.

The purpose of this paper is to examine media scholars’ diagnoses of and expectations for the digitalization of Korean cable television broadcasting with theoretical approaches of social shaping of technology. In Korea, scholars have been important players in policy-making. They have expertise in and the capability of evaluating industry and anticipating its future without being biased by commercial interests. The categorization of media researchers is an inductive method that arranges bits of information that have been gathered to make a realistic explanation possible. At the same time, when standard factors (types) are found, deductive logic can be applied to make predictions about the implications of digital cable television.

By suggesting that the digitalization of cable television should be understood from a comprehensive view encompassing society and technology, this study contributes to the better understanding of Korean digital cable broadcasting. Another rationale for the necessity of this research is that past research has rarely made perception-focused observations about the digitalization of television. Also, this study can be utilized as a basis of intercultural comparison between the West and Korea in future research.

The Status Quo and Theoretical Approaches

Digitalization of Cable Television in Korea

In Korea, the debate over the adoption of digital technology in broadcasting service first began in July 1997. The Korean government announced that the technological standard selected for digital broadcasting would be ATSC, which is the same as the U.S. standard. Since 1995, cable television has grown steadily and is firmly established as a subscription-based broadcasting business. In 1999, a government task force was formed to promote the digital cable broadcasting of cable television in Korea. In November 2002, the technological standard for digital cable television service was announced, and cable companies launched their service. A pilot service was offered by two companies (Curix and C&M) in 2004, followed by a testing of Multimedia service (MMS), IPTV, and TPS service. Also, for the past five years, the penetration ratio gap between cable television and terrestrial television has steadily decreased. The prospect of cable television is positive with its steadily increasing market share.

As of January 2008, the number of Korean households using digital cable television was 938,058, which showed a 15-fold increase within two years (Korean Cable Television Association, 2008). Some new issues have arisen, however, regarding digital-only programming and obligatory delivery of terrestrial broadcasting by the cable networks. Because the presence of

digital cable in Korea is rapidly increasing and media convergence is a critical issue for the Korean media industry, this study pays attention to the perception of media experts regarding the digitalization of the cable networks. As the first step, this study presents current theoretical viewpoints about digital cable television.

New Technology: Digital Cable Television in Society

Technology shows an unprecedentedly rapid change and a widespread effect on society—including government, economy and culture because television emerged as a technologically synthetic response to a set of newly emergent, social, political and economic needs (Williams, 2003). Digital television recently followed analog television as an innovation with multi-dimensional social impact.

Theoretically, the substitution of existing media, such as analog cable television, with new media, such as digital cable television, promotes a fundamental change in the way people perceive existing media (Atkin et al., 1998; Lin, 2001). The adoption of new media in place of existing media is influenced by superiority of new media. As for digital television, enhanced video and audio quality, and a combination of computer and television functions may become a motivation for displacement (Lin, 2001).

In Korea and the United States, digital cable television works as a replacement innovation (Rogers, 1995), which will lead to the termination of analog television use based on a government guideline. Digital cable television as an innovation implies that it is functionally better than the previous analog service, and simultaneously, it performs the functions that analog has performed (compatibility) (Rogers, 1995). However, it would be hard to conclude that broadcasting diffusion could have been affected solely by technology. Society provides the soil to grow broadcasting networks.

Technological Determinism vs. Social Determinism. One of the most common distinctions made between positions regarding the acceptance of technology is technological determinism vs. social determinism. Technological determinism encompasses both the idea that technological development proceeds via an autonomous and internal logic and that technology has an impact on the constitution of a society (Bijker, 1995). Technological determinism implies that the social result of technological development is broad, cumulative, mutually enforcing, and irrevocable. Thus, technology pushes rather than pulls societal change (Mody, 2004). In this context, it is possible to forecast the social result of the digitalization and convergence phenomena in broadcasting. As a result of technological convergence, social communication is both weakening of the old communication mode and promoting citizens' connectivity (Castells, 2000). Thus, the context of social communication is changing due to technological change.

However, technology itself is not sufficient to explain the rapid adoption of digital television service in Korea. As Han (2003) pointed out, government drive and social forces have exerted a salient impact on this rapid adoption. From this point of view, social determinism is useful in explaining the changes to digital broadcasting in Korea. Social determinism focuses on value judgments, such as 'what brings profits to our society' or 'what is harmful to our society' (Williams & Edge, 2000). This school of thought assumes that technological development tends to be in accordance with regulation or authorization. From the viewpoint of social determinism, the influence of technology is determined by governmental, economic, and cultural ideologies in the society. Under these conditions, society does not passively accept the result of technological development but rather actively intervenes in the development and use of technology.

Social Shaping of Technology: A Theoretical Alternative. Since the 1990s, scholars have found that the relationship between society and technology is not a simple, linear, cause-and-

effect relationship. The social shaping of technology (SST, hereafter) approach basically rejects technological determinism, which assumes that technology is an autonomous body that can have intrinsic logic power to influence society (Russell & Williams, 2002). Also, SST opposes social determinism with the belief that technology and society [or culture] are mutually constitutive and interacting each other. SST assumes that technology is not totally controllable but that people can utilize it as a resource for social change. According to this argument, social effects “depend on the way that particular impacts are sought or avoided by the actors involved, while the technology is being designed and negotiated” (Russell & Williams, 2002).

To be brief, SST rejects absolute control of technology by society as well as that of society by technology. The way technology is used is extended by society as a comprehensive concept that encompasses users and those who are directly or indirectly related to the use of technology. ‘Society’ here includes academic, cultural, political, and industrial agents. SST is concerned with how people, including policy makers, administrators, developers, and users, “shape” technological innovation (Dutton et al., 2004; Bijker, 1995). The authors of this paper rely on SST perspective to analyze experts’ perception of Korean digital broadcasting policy because we disagree that technology and its impact are a unidirectional mechanism.

This research surveyed the subjective perceptions of researchers in the field of digital television technology and policy because their shaping of digital television technology can significantly influence the decision making of the Korean government and national assembly. The influence of non-partisan and non-company-affiliated scholars and researchers on Korean broadcasting policy has played a key role in making and evaluating the government’s broadcasting policy. As a matter of fact, in most major Korean broadcasting policy advisory committees, many of the members have been scholars in relevant fields—Broadcasting System

Research Committee (from 1989 to 1990, 23 out of 41 members), Public Broadcasting Research Committee (from 1993 to 1994, 8 out of 15), Advanced Broadcasting Policy Consultative/Planning Committee (1994, 8 out of 19), Broadcasting Reformation Committee (from 1998 to 1999, 5 out of 14), and Broadcasting and Telecommunications Convergence Promotion Committee (from 2006 to 2009, 9 out of 20).

The process of introducing digital broadcasting in Korea has involved a wide range of factors, from the microscopic (e.g., consumer groups, individual companies) to the macroscopic (e.g., government drive, regulations, markets, and macroeconomic environment). For that reason, the issues of Korean digital broadcasting should be analyzed in terms of SST-related factors.

Social Factors of Digitalization of Broadcasting

The authors reviewed extant literature, including Korean domestic news from Korean Press Foundation (<http://www.kinds.or.kr>), journal articles, and conference papers archived in <http://www.kbc.go.kr> from January 2004 to December 2006. January 2004 is when ATSC (the U.S. standard) was announced as the standard for Korean digital broadcasting and December 2006 was the time the technological standard was put into the statutory form. This collection retrieved six dimensions related to digital cable television in Korea: (1) the convergence of broadcasting and telecommunications, (2) the market definition of the digital broadcasting industry, (3) public interest in the digital broadcasting era, (4) government policy, (5) the digital broadcasting service, and (6) regulatory environment for digital broadcasting business. These topics have been common subjects regarding digital broadcasting (See Table 1).

 Table 1 about here

Dimension 1: Media Convergence. In Korea, VoIP service is offered on the cable television network, and major telecommunication enterprises have started providing IPTV service. This status made it easy to predict that, in the near future, broadcasting and telecommunications will assume a totally different appearance from that of their past. In particular, the convergence between broadcasting and telecommunications through digitalization is the core factor of the change. Digital convergence brings changes to the domain of broadcasting and the nature of the broadcasting market (Media and Future Institute, 2005).

Dimension 2: Market Integration/Demarcation. Technological convergence between broadcasting and telecommunications concurs with the globalization of the communication business, since the boundaries that traditionally divide media markets are gradually eroding (Doyle, 2002). Due to the convergence of media sectors, the traditional three-division system in Korean cable television industry (i.e., system operator, program provider, network operator) is being blurred. Therefore, market demarcation/integration in the broadcasting industry is a meaningful discussion topic in relation to the acceptance of digital technology.

Dimension 3: Public Interest. Public interest is commonly considered the doctrine that broadcasting is supposed to follow, especially in a democratic media regime (Wilson, 1980). Rowland and Tracy (1990) argued that technological development, such as digital convergence, blurred the distinctions between broadcasting and telecommunication, and the direction of regulatory actions to secure public interest (Rowland & Tracy, 1990). The emergence of new media makes the industrial aspect of media more salient than the public interest aspect. In contrast, Choi (2000) insists that broadcasting services are not supposed to avoid their obligation to protect public interests, regardless of the digitalization. The importance of public interest may be appreciated by those who conduct broadcast business because the logic of public interest has

been highly influential ever since the development of the competitive media system. For instance, cable television was developed for the purpose of accommodating public interest in Korea by getting rid of the shade areas that were characteristic of broadcast waves.

Dimension 4: Service of Digital Broadcasting. A major characteristic of digital broadcasting is the provision of multichannel and high-quality visual signal to audiences. Analog broadcasting cannot provide interactive service because of technological limitations, while digital broadcasting can provide such services as VOD (Voice on Demand), VoIP, SMS (Short Messaging Service), games, Web search, EPG (Electronic Programming Gathering), television shopping, and banking.

Dimension 5: Broadcasting Policy. Broadcasting policy is a series of actions planned and executed by government and/or businesses for the purpose of reacting efficiently to the changes of the broadcasting environment (Yoo, 2005). The government's core rationale for a digital television drive is that it serves public interest (Graham, 2002). As seen from the Korean government's strong initiative (Han, 2003) that exponentially increased the penetration rate of broadband Internet in Korean households, governmental policies have a significant influence on the acceptance of new technology. Han (2003) also shows that social-cultural values, including public interest, diversity, fairness, common services, and economic value systems, have influenced the media policy of Korea.

Dimension 6: Regulation System. The convergence of broadcasting and telecommunications causes a lot of conflicts in the existing regulatory system (Garcia-Murillo & MacInnes, 2001). No significant improvement, however, has been made even though there are discussions of improving regulation systems in preparation for media convergence in Korea (Hong & Hwang, 2005). New broadcasting businesses may be unable to progress without a new

frame of regulations. In this sense, the discussion of the regulatory law and institutions has become an important issue with the advent of digital broadcasting.

Research Questions

Using the theoretical perspectives discussed above, this study raises the following questions:

RQ1. What are the commonalities and differences between Korean media researchers' perceptions of digital cable television, and how can we categorize their perceptions?

RQ2. What do media researchers' perceptions of the digitalization of cable television imply?

Method

This research utilizes Q-methodology to categorize and understand media researchers' subjective perceptions of the digitalization of cable television in Korea. Q-methodology measures the subjective opinions of a small number of selected people. An in-depth Q-methodology is appropriate for this research due to the following reasons. First, Q-methodology is designed to systematically investigate and retrieve respondents' personal attitudes and internal recognition. Second, Q-methodology reveals the commonalities and differences of the respondents in order. Third, it can handle the diverse opinions, expressions, and values expressed by subjects and do so in a structural way.

Q-methodology is composed of four steps. First, Q-statements are constructed by conglomerating theoretically discussed issues that have been retrieved from extant literature, as summarized in the previous section of this paper. Second, subjects are selected based on their expertise in Korean digital broadcasting policy, which is a commonly used approach in Q-methodology (P-sample). Third, Q-statements are classified based on the commonalities of P-

sample's (respondents') responses (Q-sort). Finally, the types of respondents' subjectivity are retrieved by factor analysis with a chi-square test.

Q-sample. In this research, Q-statements were constructed by considering scholarly articles and documents from seminars, academic journals, and policy reports, as summarized in the previous section. Interviews of professionals in regard to the digitalization of cable television were conducted to ensure that the Q-statements covered most key issues related to digital cable broadcasting. Then, the final Q-statements of this research were constructed (See Appendix). The digitalization issues were systematically organized with four key issues reflecting the six dimensions discussed in the theory section: (1) technology · market · industry, (2) viewer welfare · public interests · industrial aspects, (3) broadcasting policy · regulation · system, and (4) strategy · competitiveness. This paper used unstructured Q-sorts to construct instruments measuring the characteristics of individuals, rather than structured Q sorts that have been used to embody or epitomize 'theory'. Theoretically, any sample of homogeneous items can be used in an unstructured Q-sort (Kerlinger, 1986).

P-sample. Twenty-two media researchers participated in this study, including professors and researchers who were working for universities or public research institutes. Respondents were experts in media policy, technology, and industry. They were asked to evaluate Q-statements about digital cable television. The researchers who responded were involved with various broadcasting research projects regarding broadcasting law, systems, and philosophy in the context of the digitalization of broadcasting. They were working in media research institutes and universities had profound knowledge on the digitalization of media and had no private interest in the issue.

Q-sorting. Participants were given rule sheets and statement cards. They were asked to

sort thirty-six statement cards on a 9-point, quasi-normal distribution ranging from “Strongly Disagree” (-4) to “Strongly Agree” (+4). They were also provided brief explanations for their choices of strongly disagree and strongly agree statements (See Table 2).

Table 2 about here

Data Analysis. The participants’ rankings of the 36 statements were factor-analyzed based on varimax rotation and centroid factor analysis. Data were collected and factor-analyzed using Censort 2.0 (Comstat Corporation, 1988). The centroid factor analysis of Q-sort data was conducted according to Stephenson (1975).

Findings

Three Types of Subjectivity Found by Q-Factor Analysis.

The subjective attitudes toward digital cable television that were found were categorized into three types. The distribution of each type is presented in Table 3. Results ultimately sorted the 15 out of 22 researchers into one of three factors (types): six researchers were in a group of Type I (Factor I), six of Type II (Factor II), three of Type III (Factor III).

Table 3 about here

The three types accounted for 57.3% of total variance. The variance was 4.4684 for Type I (Factor I), 5.0146 for Type II (Factor II), and 3.1234 for Type III (Factor III). The percentage of total variance explained by each of the factors was 20.3% for Type I (Factor I), 22.8% for Type II (Factor II), and 14.2% for Type III (Factor III). The correlation coefficients between the

factors were .0545 between Types I and II; .4653 between Types I and III; and .2278 between Types II and III.

The characteristics of factors can be figured out by analyzing the Z-score on the level of agreement from the 36 statements (See Appendix). By comparing how strongly participants agree ($Z\text{-score} > +1.0$) or disagree ($Z\text{-score} < -1.0$) on each statement, this research retrieved and compared the characteristics of each factor (See Table 4).

 Table 4 about here

Type I: Market-focused Discontents. Type I (Factor I), named ‘Market-focused discontents’, focuses on the industrial aspect of broadcasting in the discussion of digital cable television and demands an active response in the digital market and a strengthening of its competitiveness. This group thinks that, even if digital cable television reinforces the public interest, it will not easily be differentiated from competing media ($z = -1.8103$). The group emphasizes that the discussion of digital cable television should focus on the role of the industry in the new changes of the broadcasting environment ($z = 1.5193$). It disagrees that public interest should have a higher priority than the industrial aspect ($z = -1.3451$). Their discussion of the analog era is identical to that of the digital era ($z = -1.2171$).

Participants in the group tend to think that the digital environment that cable television is entering is not progressing in favor of cable television. This group thinks that cable television is not the leader ($z = -1.4090$) and even lags behind other media in terms of digital conversion ($z = 1.3699$). According to this perception, IPTV and the emergence of other competing media might make it difficult for cable television to obtain the leading position in the digital media era ($z = -$

1.4416).

This group emphasizes that the most important factor for the success of the digital conversion of cable television will be processing the digitalization quickly and raising the quality of service through changes, such as digitalization of the system, signal quality improvement, the provision of two-way service, and high screen quality television broadcasting ($z = 1.9610$). It demands the establishment of a system to accommodate the diverse needs of viewers by providing various services that are based on digital technology ($z = 1.5055$). Moreover, it concedes that a proactive marketing strategy should be used and that a high-profit business model should be established in relation to the digitalization of cable television ($z = 1.3309$).

Type II: Public Interest and Broadcast Supporters. Type II (Factor II), named ‘Public interest and broadcast supporters’, asserts that the discussion of digital cable television should focus on public interest rather than the industrial aspects of media. It also claims that the unique sector of broadcasting should be protected even in the era of new media. This group disagrees that the broadcasting environment of cable television is changing, regardless of the digitalization and convergence of media ($z = -1.6000$). It emphasizes the claim that, even if broadcasting and telecommunications merge with digital technology, the means of technology utilization as a result of changes in culture, institution, and policy of the society ($z = 1.6004$).

Members of this group argue that the discussion of digital cable television should focus on the realization of public interest ($z = 1.7384$). They disagree with the opinion that discussions about digital cable television should be converted into discussions about the industrial aspects of broadcasting in light of innovations in the broadcasting environment ($z = -1.6111$). Also, this group refutes the claim that a broadcasting regulation model is not needed to protect public interest ($z = -1.5240$). They emphasize that public interest should be stressed even when new

broadcasting methods and new media emerge ($z = 1.5440$).

This group denies the proposition that there is articulate cooperation among regulatory organizations on the establishment of broadcasting policy and regulations ($z = -1.5177$). It does not support the argument that institutions that are currently regulating digital broadcasting are excellent in terms of the efficacy of their professionalism and regulation of policy ($z = -1.2449$). Participants of this group disagree that there is fair treatment of cable television as compared to terrestrial or satellite broadcasting, due to the asymmetrical regulation of each medium ($z = -1.1122$).

They oppose the claim that the regulation of media entrance and the possession of the broadcasting industry needs to be mitigated ($z = -1.2237$). Instead, they argue that, if a leading company from the telecommunication sector enters the field of broadcasting, its significant market power should not be transferred and fair competition should be guaranteed systematically ($z = 1.1911$). Accordingly, they think that reorganization is needed for the current regulating organization ($z = 1.1956$). This group further believes that, if digital cable television reinforces the public interest of broadcasting, the status of this medium will become higher than that of competing media ($z = 1.3585$).

Type III: Regulation-oriented Optimists. Type III (Factor III), 'Regulation-oriented optimists,' stresses that current broadcasting policy and regulations are unclear, even though regulation and policy have a significant effect on how and why society chooses digital technology. This group insists that current regulatory ministries, such as the Korean Broadcasting Commission, the Ministry of Culture and Tourism, and the Ministry of Information and Communication, are ineffective in terms of professionalism and regulation of policy ($z = -1.8804$). They also view the regulation system that copes with the convergence of media as not

responding with sufficient speed ($z = 1.7137$). The group makes the criticism that they do not expect regulatory organizations to cooperate articulately in the establishment of broadcasting policy and regulations ($z = -1.4594$). Thus, the members of this group emphasize their claim that discussion about the reorganization of regulating ministries is needed because digital broadcasting includes all media that fall between the categories of broadcasting and telecommunications ($z = 1.7123$).

Participants of the group disagree with the opinion that the digitalization and convergence of cable television is unrelated to the environmental change of cable television ($z = -1.5785$). They believe that the manner in which the digital convergence of broadcasting and telecommunications is selected by society is based on the culture, institutions, and the policies of that society ($z = 1.5785$). Also, they think that cable television is being transformed into a new media environment ($z = 1.7123$).

They disagree with the opinion that cable television has lagged behind other media in terms of digitalization ($z = -1.7137$). Also, participants of this group disagree that it would be hard to predict the state of digital cable television when similar services and multichannel services emerge ($z = -1.4089$). They oppose the claim that the status of cable television will rise above that of competing media when cable television supports public interest of broadcasting ($z = -1.3270$). They indicate that the broadcasting regulation model for public interest, which is based on the scarcity of electric waves, has weakened ($z = 1.2436$).

Consensus among types

In spite of the discrepancy among different factor groups, all groups share some opinions. Most of all, the three groups stress that the regulation institutions related to cable television and digitalization in the era of media convergence are unsatisfactory in terms of their professionalism

about policy and the efficacy of regulation ($z = -1.6230$) as well as cooperation between departments ($z = -1.4157$). They criticized the regulation system as not responding to the digital convergence situation ($z = 1.2139$).

All subjects disagree with the proposition that media digitalization or convergence is not closely linked to cable television, regardless of their positive or negative opinion on the digitalization of cable television in the present and future ($z = -1.1727$). They think that the manner in which the digital convergence of broadcasting and telecommunications is selected by society differs according to the culture, institution, and policies of a society ($z = 1.1600$). Every group agrees with the proposition that service quality and the speed of the conversion to digital are important factors in the digitalization of cable television ($z = 1.1871$). All groups doubted that cable television will take a leading role in digital media because it will compete with other convergence media, such as IPTV ($z = 1.0484$).

Discussion

This study was conducted from the viewpoint that the current discussion of the digital conversion of cable television should not be simply limited to issues of how the broadcast environment of cable television should be changed through digital technology. Rather, this study intends to consider both technological and societal factors in order to suggest a balance between technological determinism and societal determinism. This paper, in particular, puts an emphasis on two issues: how media researchers' perceptions of the digitalization of cable television were categorized based on commonalities and differences; and the implications of media researchers' perception of the digitalization of cable television.

The perception of digital cable television among researchers was categorized into three types: *market-focused discontents*, *public interest and broadcast supporters*, and *regulation-*

oriented optimists. Market-focused discontents focused on the industrial aspect of broadcasting in discussions of digital cable television and demanded an active response in the digital market as well as an enhancement of its competitiveness. Public interest and broadcast supporters asserted that the discussion of digital cable television should focus on public interest rather than its industrial aspects and that the unique sector of broadcasting should be protected even in the era of digital cable television. Regulation-oriented optimists stressed that current broadcasting policy and regulations were neither quick nor efficient enough, even though they thought that the current circumstance of digitalization was favorable to cable television.

From an SST perspective, the high variance of opinions among the three groups reveals that policy-making processes regarding the digitalization of cable television should be able to survive the conflicts that arise between discrepant perspectives. According to SST, the way technology is used is significantly affected by how people—policy elites in this study—perceive the technology, its potential utility, and its prospect for the future.

In spite of the discrepancies among different types, all groups shared certain opinions. Attention should be paid to the fact that all three types agreed that the digitalization of cable television was significant and that cable television should provide programs of high quality. They placed emphasis on the social culture, system, and policy, as well as the need to preserve competitive power through the improvement of quality and by coping with the speed of the conversion to digitalization. Also, all three groups agreed that the current regulation system in Korea was insufficient to deal with new developments of media circumstance. They pointed out that the professionalism of policy makers, regulation efficacy, and cooperation between regulation ministries regarding the digitalization of cable television needs to be developed. Discussion of overall regulation is needed to meet the demands for efficient policy making and

regulation processing in the era of digitalization. In particular, the issue of overlapped tasks between the Broadcasting Commission, the Ministry of Information and Communication, the Ministry of Culture and Tourism, and the Fair Trade Commission should be resolved.

In March 2008, newly elected president Myung-Bak Lee spurred on the process of digital conversion by establishing the “Korea Communications Commission.” This research found that the common concerns among Korean media researchers about professionalism and expertise in digital conversion have intensified.

This research also indicated that there was tension between two contrasting perceptions that emphasized either public interest of broadcasting or its industrial aspect in regard to digital cable television. An interesting find of this research is that respondents who stress public interest still stay with the useless rationale of it, the “scarcity” of electric waves. However, such a position should be revised in the era of multimedia and multichannel digital cable television, where an “almost unlimited” number of channels are offered.

From the viewpoint of SST, the findings of this research confirm that diverse perspectives of policy elites reflect the complexity of the new type of television. Digitalization of cable television reignites old debates on public interest, ownership, and policy efficiency. Government-driven digitalization has worked for broadband Internet diffusion in Korea, but such an experience has failed to homogenize the perceptions of Korean policy elites and lead them to support the trend of high government involvement; yet the consensus among elite researchers that the digitalization of cable television is indispensable is a great resource for the digitalization of Korean cable television.

Admittedly, this research has a weakness in that it limits its respondents to those found within academic society (i.e., professors and researchers at media research institutes and

universities). Therefore, opinions from cable broadcasting companies, regulation institutions, or members of NGOs dealing with media should be added in future research; however, as referred to above, media researchers have exerted a significant influence on policy-making processes in Korea, so this study still has a high level of applicability.

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Appendix. Factor Scores in Q-sample

No.	Statement	FactorI	FactorII	FactorIII
Q1	The manner in which society selects the digital convergence of broadcasting and telecommunications differs according to the culture, institution, and policy of a society.	1	4	3
Q2	Technological developments, such as the digitalization of broadcasting and the convergence of media, are significantly influential to the culture, institutions, and communication of the society.	3	-1	2
Q3	In the new media environment, cable television is emerging from technical developments such as digitalization.	2	1	4
Q4	The environmental change in cable television is progressing separately for digitalization and convergence.	-1	-4	-4
Q5	Cable television offers a multimedia service with text, figures, voice, video, and stop-motion provided simultaneously through a two-way transmission network by means of digitalization of broadcasting.	-1	0	1
Q6	Cable television is the front-runner in the digital conversion of broadcasting.	-3	-1	-2
Q7	Cable television has lagged behind other media in respect to digitalization.	3	0	-4
Q8	When the digitalization of cable television has been completed, the broadcasting industry will be activated and will greatly influence economic growth.	-2	-2	1
Q9	Market delimitation of the network, platform, and contents in the digital era remains unclear even though cable broadcasting specified categories of the broadcasting industry and business.	-1	1	0
Q10	In the digital era as in the analog era, cable television should pursue the public interest of broadcasting.	-2	4	-1
Q11	Even if a new medium appears, cable television should emphasize public interest instead of the industrial aspect of media.	-3	4	-2
Q12	Upon the emergence of technologically new broadcasting methods, such as cable television and satellite broadcasting, the broadcasting regulation model for public interest, which is based on the scarcity of electric waves, has weakened.	1	-4	3
Q13	Discussions about digital cable television should be converted into discussions about the industrial aspects of broadcasting in light of the innovations in the broadcasting environment.	4	-4	2
Q14	Cable television achieved the goal of serving public interest by decreasing fringe areas and expanding its service to a diversity of regions.	-3	-2	0
Q15	Cable television's conversion to digital is a significant factor in its benefit to viewers.	0	-1	-1
Q16	Viewers' welfare in digital cable television means fast installation and provision of stable service.	1	1	0
Q17	Viewers' welfare in digital cable television is directly linked to whether they can use the service inexpensively.	0	2	0

Q18	A two-way channel and a variety of programs would substantially reflect viewers' demands.	1	-1	1
Q19	Converting the existing analog broadcasting system into a digital system is a significant national goal in terms of viewers' welfare and nurturing related industry.	0	1	-2
Q20	There is articulate cooperation between regulation organizations on the establishment of broadcasting policy and the regulation of digital media.	-2	-3	-3
Q21	The regulation system which prepares media convergence is not responding quickly enough to the convergence situation through digital technology.	2	2	4
Q22	Digital broadcasting includes all media that fall within the hazy area between the categories of broadcasting and telecommunications, and the regulation institution needs reorganization.	0	3	4
Q23	Institutions that regulate digital broadcasting are very effective and professional in their regulation of policy.	-4	-3	-4
Q24	A service that implements broadcasting should be applied to the broadcasting regulation frame.	-1	1	-1
Q25	In the cable television business sector, entrance and possession regulation needs mitigation.	2	-3	0
Q26	If a leading company from the telecommunication sector enters the broadcasting service, its significant market power should not be transferred and fair competition should be guaranteed systematically.	0	3	1
Q27	Cable television is no less fair than terrestrial or satellite broadcasting due to asymmetrical regulation of each medium.	-2	-2	0
Q28	Digital cable television has established a stable position as charged broadcasting, and it has potential because it divided the monopoly market of free broadcasting.	-1	0	2
Q29	It is not clear what the future of digital cable television will be when free similar services and multichannel services emerge.	2	0	-3
Q30	Cable television will take a leading role in digital media regardless of the introduction of IPTV.	-4	-2	-2
Q31	Providing a debating ground to discuss the development of local culture and local issues is an important duty of cable television, even in the digital era.	0	2	-1
Q32	The most important factor in the digital conversion of cable television is the speed of the conversion and the quality of the service.	4	2	2
Q33	If cable television provides IPTV or other combinations of products, the profit will be increased.	1	0	-1
Q34	Digital cable television should utilize active marketing and establish a profitable business model.	3	0	1
Q35	If digital cable television strengthens the public interest of broadcasting, the status of cable television will become higher than that of competing media.	-4	3	-3
Q36	Cable television should establish a system to provide various digital technology services in order to meet the diverse demands of viewers.	-4	-1	3

Table 1. Social Factors Regarding the Digitalization of Broadcasting

Component Factors	Sub-factor
Technical Factors	Service factor: broadcasting service, additional service Convergence phenomena: market, service, convergence
Systematic Factors	Time decision: decision for digital conversion completion time Public interest: changed concept of public interest in the digital broadcasting era Regulation organization: organization to regulate trends in media convergence Government policy: government support, content regulation policy Convergence phenomena: convergence in market, service, and media
Industrial Factors	Market demarcation: demarcation of charged and free broadcasting Convergence phenomena: convergence of market, service and media

Note: Constructed by authors from news (<http://www.kinds.or.kr>) and literature review of conference paper and journal articles archived in <http://www.kbc.go.kr> from January 2004, at which time ATSC, the U.S. standard, was announced as the Korean standard for digital broadcasting in the statutory form to December 2007.