

The Impact of a Multichannel Environment on Television News Viewing: A Longitudinal Study of News Audience Polarization in South Korea

SU JUNG KIM¹
Northwestern University

JAMES G. WEBSTER
Northwestern University

The abundant choices offered by digital media have raised concerns that audience behavior in news consumption might become polarized into people either aggressively seeking out or avoiding the news. Despite growing evidence to that effect, there is no research that precisely measures exposure to news over a period of years. This study assesses TV news consumption by analyzing respondent-level “peplemeter” data from 2001 to 2007, a period of rapid growth in Korean cable television. We find that polarization in news viewing had already been established at an earlier stage of cable penetration, and that it has changed little over the seven-year period. Political implications for the division between news “junkies” and “avoiders” are discussed.

Introduction

An “informed citizenry” is one of the fundamental elements of modern democracy (Schudson, 1998). The concept of “informed citizenry” posits that citizens who are well-informed about political issues, policies, and systems are better able to make reasoned decisions and engage in political action (Delli Carpini & Keeter, 1996; Nie, Junn, & Stehlik-Barry, 1996). In modern democracy, where millions of people live in dispersed locations, media play a crucial role in providing political information (Couldry, Livingstone, & Markham, 2007; Graber, 2004). As Graber points out, modern democracies can hardly be sustained through face-to-face interactions or two-step communication processes (2004, p. 546). By attending to public events portrayed in mass media, people learn about issues, obtain information, and form their opinions on politics. Political knowledge and opinion, in turn, translate into consistent forms of political behavior (Delli Carpini & Keeter, 1996).

¹The authors thank Drs. James Ettema and Eszter Hargittai for their insightful comments on this research. We also thank The Foundation for Broadcast Culture and Dr. Namjun Kang for making the data available. We are grateful to the anonymous reviewers for their constructive comments.

Su Jung Kim: ksio2@northwestern.edu

James G. Webster: j-webster2@northwestern.edu

Date submitted: 2010-12-18

The role that media, especially news media, play in motivating political engagement has been well documented (see Kanervo, Weiwu, & Sawyer, 2005, for a review of the relationship between media use and political participation). However, the rapid expansion of media channels in the current media environment has raised new concerns about a shrinking news audience and its implications for political communication and democracy at large (Bennett & Iyengar, 2008). Traditional news outlets have seen their audiences erode in favor of newer options (Hollander, 2008; Prior, 2007; Webster, 2005), a phenomenon that is consistent with larger trends in audience fragmentation (Tewksbury, 2005; Webster, 2005). More important, the abundance is suspected of enabling audience polarization, a condition in which people either seek out or avoid news altogether, creating the division between news "junkies" and "avoiders" (Ksiazek, Malthouse, & Webster, 2010; Prior, 2007).

Despite much attention being paid to the polarization of news audiences, most empirical work on this area suffers from two limitations. First, if the research actually measures variation in news consumption across the population, it typically does so at only one point in time. We have very little information about whether polarization increases with the number of choices people have. Second, most studies of news consumption have been conducted in the United States or Western Europe. There is a dearth of research on the news audience in non-Western countries where media systems function in different political, economic, social, and cultural contexts.

This article addresses those shortcomings by tracking television news viewing in South Korea (hereafter, Korea) over a seven-year period. We use individual-level television ratings data that had been collected at two-year intervals from 2001 to 2007. The use of seven years of ratings data not only allows us to analyze the changes in television news viewing in a longitudinal manner, but it also allows us to use more accurate measures of television news viewing. Previous research has indicated that self-reported measures of news viewing overestimate the amount of news consumed due to social desirability bias and imperfect recall (Prior, 2009). The "peplemeter" data we use is generated by electronic monitoring of the viewing behavior of panel members, thereby minimizing the risk of distorted reporting of audience behavior.

Korea serves as a particularly interesting case study to deepen our understanding of how the proliferation of television channels has affected the ways in which people choose news content. Like many Western countries, Korean television was once dominated by a few broadcast networks. However, over the last decade, a dramatic increase in the number of TV channels competing for the audience has challenged that dominance. The wide penetration of cable television at the turn of the 21st century, combined with the growth of satellite television, has increased competition in the media market and weakened the previous, long-held dominance of the public broadcasters in a relatively short period compared to the experiences of Western countries (Schejter & Lee, 2007).

We find that these structural changes have fragmented the news audience without producing a marked reduction in total TV news consumption. There is, however, considerable variation in news viewing on the individual level, with almost one third of the population seeing no news. Moreover, our research indicates that polarization in news viewing has changed very little in seven years. This raises questions

about whether polarization is a stable feature of news consumption, an ongoing process that has only recently be let loose, or a phenomenon that varies from culture to culture.

Television News Viewing in a High-Choice Media Environment

Television news viewing happens within a larger environment where media outlets are generally in competition for a limited supply of public attention (Christiansen & Tax, 2000; Webster, 2008). Not only are television channels vying with each other, but increasingly, consumers can turn to "on-demand" media (e.g., DVRs, Internet, mobile media, etc.) to satisfy their desires. Moreover, media compete with other non-media activities such as leisure, domestic work, studying, or sleeping (Hamill, 2011; Vitalari, Venkatesh, & Gronhaug, 1985). Once people decide to use media, it is often assumed that they will exercise a penchant for selective exposure in their choices. In the case of news and information, this might show itself as a tendency to seek out news or avoid it altogether (Ksiazek, et al., 2010; Prior, 2007; Wonneberger, Schoenbach, & van Meurs, 2011). Or, among those with an interest in news, we might expect people to select ideologically compatible stories or outlets (Hollander, 2008; Iyengar & Hahn, 2009; Stroud, 2010). These micro-level predispositions then scale-up to larger patterns of audience behavior—fragmentation and polarization.

In the West, audience fragmentation has been both expected and observed for decades (Bergg, 2004; Hindman & Wiegand, 2008; Meier, 2003; van der Wurff, 2004; Webster, 2005). As more media outlets competed for the audience, viewing became more widely distributed. Television news audiences have been no exception. Prior (2007) has documented a steady decline in the ratings of newscasts on major U.S. broadcast networks. Although the audience for mainstream media has eroded, average television news consumption has been largely unaffected. This is due largely to the availability of 24-hour cable news networks. While broadcasters have lost viewers, cable news has gained them, leaving total TV news viewing relatively stable. The question is whether everyone is still watching as much as they once did, or whether news viewership is now polarized into audience groups that do and do not watch news.

Audience polarization is defined as the tendency of audiences to move toward extremes of either choosing or avoiding some class of media content, such as program types or channels (Webster & Phalen, 1997, p. 110). This kind of audience behavior is precisely what one would expect to occur once people became free to exercise their psychological predispositions (i.e., selective exposure). Whether or not audiences are polarized into news junkies or avoiders would not be revealed by looking at average news viewing over time, but can only be captured by measuring the total amount of news each individual consumes and assessing variation across the population (Webster, 2008).

Previous studies in both audience research and political communication suggest that increasing media choices promote polarization in news media use. This is sometimes a matter of consuming or avoiding news in general (Ksiazek, et al., 2010; Prior, 2007), and sometimes a matter of selecting ideologically compatible outlets (Graf & Aday, 2008; Gurevitch, Coleman, & Blumler, 2009; Hollander, 2008; Stroud, 2008, 2010; Webster, 2005). Some counter-argue that, in fact, people choose news media that deliver messages counter to their own political predispositions (Chaffee, Saphir, Graf, Sandvig, & Hahn, 2001; Holbert, Garrett, & Gleason, 2010; Holbert, Hmielowski, & Weeks, In Press; Webster &

Ksiazek, 2012). Both types of polarization (i.e., polarization of news seekers and avoiders, and polarization of right- and left-wing news media users) could potentially shrink the public's common ground in political discussion, which would pose a threat to democracy. Our study focuses on the former type of news audience polarization—polarization of news audience into news avoiders and seekers.

Particularly relevant is Prior's (2007) argument that news audiences have become divided into "news junkies" and "switchers." This happens because, in a high choice environment, people with a news preference are more likely to seek out news, whereas people having an entertainment preference will tend to indulge in entertainment offerings. Prior claims that the stability of average total news viewing in the United States does not reveal increasing inequality in the level of news consumption among people who prefer following news versus those who enjoy watching entertainment. Analytically, the more telling statistic is variation in average news viewing from year to year. If his argument is correct, we should be able to find increasing variance in total news consumption over time with means staying at a similar level.

Figure 1 presents a visual illustration of changing patterns of total news consumption on the basis of Prior's (2007) polarization argument. Hypothetically, we can expect that people's levels of total news consumption will not vary much when there are only a few channel options available (represented as a blue solid curve). However, when available channels increase, people become free to choose or avoid news depending on their preferences, resulting in more portions of people at the extremes of the non-viewing/viewing spectrum (represented as a red dotted curve). The mean will remain at a similar level because the increase in news viewing among news seekers will cancel out the decrease in news viewing among news avoiders.

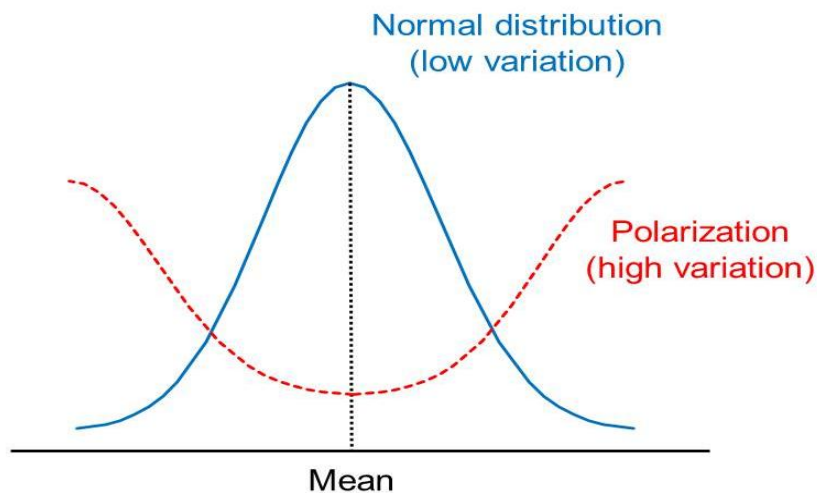


Figure 1. Visual Illustration of Audience Polarization.

Unfortunately, no research adequately tests such predictions, because the relevant studies lack respondent-level data that precisely measure TV news viewing over a period of years. By analyzing television ratings data collected at the individual level during the penetration of cable television in Korea, this study offers a more precise look at whether news viewing has become more polarized over a seven-year period. Consistent with Prior's (2007) argument, our expectation is that total TV news consumption will be relatively stable, but that the variation in news viewing on the individual level will increase as more channels become available to Korean audiences.

The Television Market in Korea

Before the analysis of changing news consumption patterns is presented, it is crucial to describe the structure of the television market in Korea and explain the importance of the seven-year time period this study analyzes. There are two types of television distribution systems in Korea: terrestrial broadcasting systems and multi-channel distribution systems. Before the introduction of cable television, three nationwide terrestrial television networks (KBS, MBC, SBS) dominated the television market. Among those networks, KBS (Korean Broadcasting System, which owns two television channels, KBS1 and KBS2) and MBC (Munhwa Broadcasting Corporation) are public broadcasters, while SBS (Seoul Broadcasting System) is a commercial broadcaster.²

The multi-channel distribution systems consist of cable and satellite television, as well as DMB (Digital Multimedia Broadcasting). Among these media outlets, cable television is the dominant player, having experienced rapid adoption among the Korean population. Cable television was introduced in Korea in 1995,³ but it did not gain sufficient subscribers until 2002 due to poor content and strict government regulation (Bae & Baldwin, 1998). Cable subscription increased substantially after the Korean government implemented deregulation in 2002. The number of households subscribing to cable was less than 6 million in 2001, but that number had grown to more than 15 million by 2009, surpassing an 80% penetration rate (Korean Communications Commission, 2009).

The growth of a multi-channel environment in Korea can best be illustrated by examining the changes in the average number of channels that are provided by cable operators (Figure 2).⁴ The trend in Figure 2 shows steady growth, increasing from 68 channels in 2002 to 131 channels in 2009. The number

² In addition, EBS (Education Broadcasting System) is another public broadcaster equivalent to PBS (Public Broadcasting System) in the United States. It is excluded from the analyses, since it mainly airs documentary, educational, arts, and cultural programs.

³ There are two types of cable television companies in Korea: relay operators (RO) and system operators (SO). The former is also known as narrowband cable; RO companies have retransmitted terrestrial broadcast channels and a few foreign programs in local areas to function as the "community antenna television" since the late 1960s. The latter is known as broadband cable, a multi-channel television service that we assume to be the typical cable television service (Sohn & Yeo, 2007). Instances of "cable television" in this paper refer to broadband cable.

⁴ The number of channels one receives varies depending on the type of services to which one subscribes (i.e., basic or premium).

is expected to keep growing with the acceleration of the analog-to-digital television transition.⁵ The rapid increase of available options from cable television had a significant impact on the share of terrestrial channels. In 2001, the total audience share of the four terrestrial channels accounted for 93.7% of all television viewing time, but it had dropped by more than 20% (to 71.1%) by 2007. Terrestrial networks have also experienced the decline of their share of the primetime news programs, all of which suggest that people's attention has spread across various channel options as more content has become available.

Cho and Kang (2009) described this period of rapid growth in the Korean television market as the infancy period (2001), take-off period (2002–2006), and mature period (2007). We are particularly interested in this larger time period, since the dramatic increase in channel options during this time period has some resemblance to the proliferation of television channels in the U.S. television market for the past three decades. We examine whether people have polarized into news seekers and avoiders as the number of available channels has increased with the fast adoption of cable television in Korea.

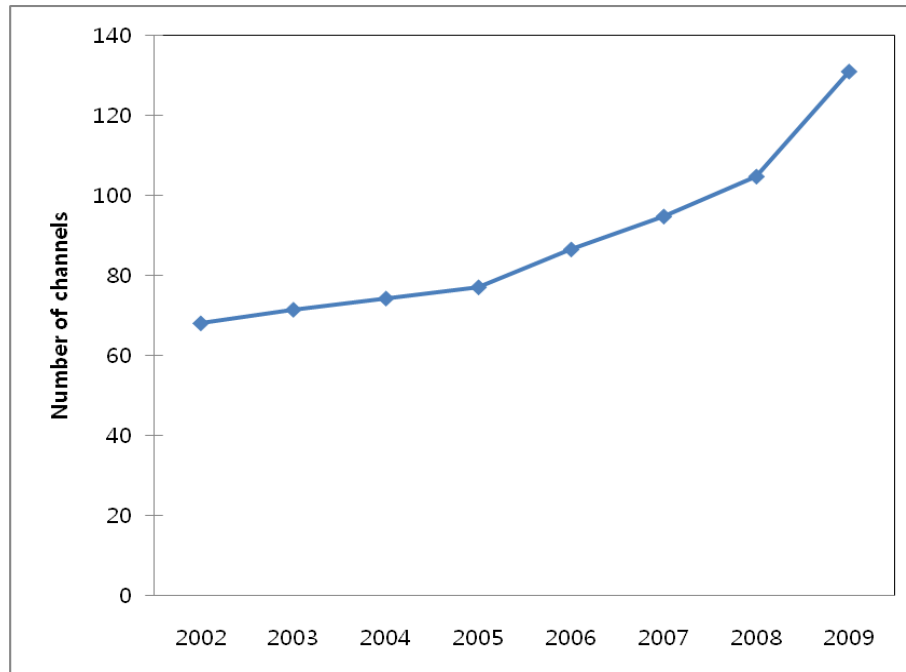


Figure 2. Average Number of Channels Provided, 2002–2009.

Source: Korean Broadcasting Commission (2002–2006),
Korean Communications Commission (2007–2009).

⁵ The number of channels provided from 2006 to 2009 is calculated by averaging the number of channels in both analog and digital formats. The average numbers of channels provided in analog and digital format are 75 and 172, respectively, as of June 2009.

Research Question and Hypothesis

From the previous discussion on television news viewing patterns in a high-choice media environment, we pose the following research question and hypothesis.

RQ1. Is there a statistical difference in the annual individual means (or medians) of total television news viewing between 2001 and 2007?

H1. There will be an increase in the annual individual variance of total television news viewing between 2001 and 2007.

RQ1 and H1 concern whether audience polarization in television news viewing has developed over time as the number of available channels has increased. According to the selective exposure argument, people will choose their most preferred media content that best satisfies their preferences. With a limited number of choices, it is highly likely that people will encounter news programs, even though such programming may not be their most preferred content. However, when people have a large number of media channels to choose from, it becomes much easier for people to only consume media content that they desire most, dividing the audience into news seekers and avoiders, depending on one's content preferences. Statistically, this will result in stable means (or medians) and increasing variance over time (thus, no difference over the years). Based on this projection, this study examines whether the average amount of total television news viewing has been stable while the changes in variance has indeed increased, a statistical situation which would indicate the emergence of news junkies and avoiders.

Methods

Data

This study conducted a secondary analysis of the television ratings data collected at the individual level by AGB Nielsen Media Research Korea, using the portion of its "peplemeter" sample that subscribes to cable television. The data was collected during the third week of April at two-year intervals from 2001 to 2007 in the Seoul market, which is the largest market in Korea. The sample years were chosen considering the recent growth of cable television in Korea. As noted before, previous research points out that the development of cable television in Korea can be characterized as its infant period (2001), take-off period (2003), and mature period (2007) in terms of the increase in the combined shares of all available cable channels (Cho & Kang, 2009). Following this approach, this study examined individuals' news viewing patterns at two-year intervals from 2001 to 2007. The sample weeks were chosen to avoid sudden changes in programming due to atypical events that might have affected normal television viewing behavior. Table 1 presents the number of channels measured and the size of sample members used in the analysis.⁶

⁶ The number of channels shown in the table is not exactly the same as the number of channels available to audiences at each time point. AGB Nielsen Korea does not report the ratings of channels with too small audiences, even though peplemeter records all viewing behavior.

Although examining cable-subscribing households alone does not allow us to make a direct comparison between households watching only a few broadcast channels and those subscribing to almost a hundred cable channels, tracking individual-level total news consumption among cable subscribers over time makes it possible to observe changes in television news viewing precisely, as cable television has become widely adopted among Korean television audiences. Importantly, cable television gained substantial popularity after more entertainment channels were added to channel listings with the deregulation of the Korean television market in 2002. An increase in entertainment is the factor that Prior (2007) argues would produce increasing polarization. Cable television launched its service with 22 channels in 1995, and saw significant growth after 2002. As presented in Table 1, we can see that the sample used in our study experienced a substantial increase of channel options between 2001 and 2003, followed by a gradual increase from 2003 to 2007. Thus, the changes we observe after 2002 will show us how the progress from a lower to higher choice media environment has impacted patterns of news consumption on both broadcast and cable television.

**Table 1. Number of Channels and Peoplemeter Sample Size
(Measured in Persons) Across Sample Years.**

	2001	2003	2005	2007
Number of channels	39	66	76	85
Peoplemeter sample size	1,925	2,104	2,167	2,912

Measures

To track the degree of the polarization in television news viewing patterns, this study adopted indicators that were suggested in previous research to assess the state of audience polarization (Prior, 2007). Total weekday television news viewing was calculated by summing average time spent on terrestrial primetime news programs and cable news channels during weekdays. For terrestrial news programs, this study only included weekday primetime news programs of the 4 terrestrial channels (KBS1, KBS2, MBC, SBS). This is because 1) primetime news programs are the main news offerings that deliver the most salient issues of the day; 2) these programs have been scheduled in the same time slot (9–10 p.m. for KBS1 and MBC, 8–9 p.m. for KBS2 and SBS) for several years; and 3) they are available to almost all television households in Korea, which make them less likely to be affected by audience awareness or channel coverage.⁷ Cable news channels included 1 general news channels (YTN), which is the equivalent of CNN in the United States, and 3 business news channels (MBN, WOW-TV, and

⁷ Weekend primetime news programs were excluded due to the way the data have been provided to the authors. The raw ratings data have been aggregated at a one-hour interval, which makes the inclusion of the weekend primetime news programs, which usually air for 30 minutes, impossible.

Business&-TV). Additionally, the policy channel (KTV) and the National Assembly channel (NATV) were included when they became available in the cable television market during the sample years.^{8,9}

Polarization of television news viewing patterns was measured by the changes in the distribution of time spent on weekday TV news viewing across sample years. This measure was devised based on Prior's (2007) argument that we need to distinguish the mean and variance of total news viewing to detect whether the polarization of news viewing has emerged, since there will be more extreme patterns of news viewing (i.e., news junkies and switchers) in the high-choice environment.

To test Prior's (2007) argument empirically, two separate analyses were conducted to see whether television news viewing patterns have been significantly polarized between 2001 and 2007. First, a Mann-Whitney *U* test was conducted to see the difference in the median of total weekday TV news viewing between 2001 and 2007. A Mann-Whitney *U* test was chosen because the total news viewing variable does not have a normal distribution, and a log transformation does not perfectly solve the problem, due to the many cases that have a value of zero (i.e., a majority of people did not watch news at all during weekdays). A Levene's test was conducted to assess whether the variance of total TV news viewing in 2001 and 2007 is equal. Second, based on the total time spent on weekday TV news viewing, we grouped news audiences into 10 groups, ranging from no news viewing to heavy news viewing (i.e., more than 4 hours of news viewing per weekdays) with a 30-minute interval for each group. We then compared the distributions of the groups in each sample year to detect whether the proportions of news junkies and avoiders have changed with the growth of cable television.

Results

To examine the level of polarization of total television news viewing, the distribution of weekday television news viewing (i.e., the average number of minutes spent watching either primetime news, cable news, or public affairs channels during weekdays) for each sample year is provided in Table 2. As we can see from the position of the means and medians, the distribution of weekday news viewing in each sample year is positively skewed, indicating that the majority of people consume relatively little news, whereas only a fraction of people at the long tail watch a lot of news.

⁸ There are various program formats that might provide salient issues of society other than news programs such as dramas like "*Law & Order*," infotainment programs like "*Entertainment Tonight*." However this study limited its analytic scope to primetime news programs, cable news channels, and public affairs channels (i.e., hard news format).

⁹ NATV and Business&-TV started broadcasting in 2005 and 2007, respectively.

Table 2. Distribution of Weekday News Consumption, 2001–2007.

Year	Sample	Mean	Standard deviation	Min	Median	Max
2001	1925	62.86	84.45	0	36	1105
2003	2105	80.96	121.30	0	47	2316
2005	2167	61.03	88.51	0	28	1545
2007	2912	60.29	92.72	0	27	1263

From Table 2, we can see that the means and variance of weekday TV news viewing have changed in the opposite direction: Except for 2003, the overall pattern shows a decreasing trend for the means and an increasing pattern for the variance.¹⁰ The mean for weekday news viewing has slightly reduced from 63 minutes in 2001 to 60 minutes in 2007. The diminishing pattern becomes clearer when we look at the changes in the medians. In 2001, the median for weekday news viewing was 36 minutes, which indicates that a half of the sample spent 36 minutes watching news programs or channels during typical weekdays. In 2007, the number was down to 27 minutes. The increase in variance implies that the proportion of people who are at the two extremes of news viewing—either no viewing or heavy viewing—has increased. This is consistent with Prior's argument that increased channel options have enabled audiences to choose programs following their content preferences, and as a result, people who have a strong preference for news ("news junkies," in his term) consume a lot of news, whereas people with an entertainment preference ("switchers") watch a little or no news (2007, pp. 155–159).

To formally test Prior's (2007) prediction, a Mann-Whitney *U* test and a Levene's test were performed to see the difference in the medians and variance of total TV news viewing between 2001 and 2007. The results of the two tests revealed that there is a significance difference in the medians, but no difference in the variance between 2001 and 2007 (for the Mann-Whitney *U* test, $z = 2.347$, $p < 0.01$; for the Levene's test, $F(1, 4835) = 0.81$, $p = 0.36$). The findings suggest that, on average, people spend less time on television news viewing in 2007 than in 2001, but the variability of total news viewing remained at a similar level. Regarding RQ1, we found that the median of total television news viewing has decreased over time. The stability of the variance over the seven-year period suggests that the result is in the

¹⁰ A sudden increase of news consumption in 2003 (Table 2) deserves an explanation. As mentioned earlier, cable television penetration in Korea skyrocketed between 2002 and 2004 when the government decided to deregulate cable television industry. As more channels had become available as a result of deregulation, the total time spent on cable television has significantly increased in 2002 and 2003. The overall increase in cable television consumption also had an effect on increasing consumption of cable news channels since cable news channels were well-recognized than other channels- even better than drama or movie channels that had just launched around these years.

opposite direction of H1. H1 is not supported.

The contradictory results of RQ1 and H1 lead us to the question of how we should interpret a decrease in the median and stability of the variance regarding the polarization of total television news viewing. To give a detailed explanation of the changes in total news viewing patterns, we categorized the audiences in each sample year into 10 groups based on the amount of weekday total news viewing at a 30-minute interval, as presented in Figure 3. The most notable finding is the similarity of the distribution of total news viewing across the sample years, especially between the first and last recorded years (i.e., 2001 and 2007). The proportion of people who did not watch primetime news or cable news channels differed by only 1% (28.9% in 2001, 29.9% in 2007). Even when we included the second group (i.e., people who watched news less than half an hour on weekdays), the difference was only 4.4%. The proportion of people who consumed television news heavily (i.e., more than 4 hours of weekday news viewing) was almost the same in both years (3.6% in 2001, 3.7% in 2007). Even after we eased our criterion for news junkies to include those who spend 3 hours or more on television news viewing, the proportion was exactly the same, 7.9%.¹¹

The detailed description of total news viewing patterns provides valuable information that is not evident in the statistical summaries in Table 2. The pattern of television news viewing in 2001 suggests that television news viewing was already polarized before cable television had fully penetrated the market. It is also striking that the level of polarization had changed little from 2001 to 2007, despite the rapid growth of cable television during the seven-year period.¹² There was a slight increase in the proportion of people in the middle range, those whose television news viewing was more than 30 minutes and less than 3 hours per weekdays between 2001 and 2007, but the overall patterns looked very similar. In particular, the portions of news junkies and avoiders were almost identical in 2001 and 2007.

¹¹ Some might argue that it is more appropriate to use the ratio of news viewing to total viewing, rather than an absolute measure of total news consumption, because news junkies and avoiders could be defined as people who consume "relatively" more or less news compared to their overall television viewing. A separate analysis using a news ratio variable produced similar results. There was a slight decrease in the proportion of groups who did not watch primetime news, cable news, or public affairs channels on weekdays (24.2% to 22.8%). The proportion of news junkies (people who spent more than 50% of their viewing time on news) increased by 2.4% (from 5.8% to 8.2%).

¹² There seem to be less news avoiders and more news junkies in 2003. The result is partly due to the inflation of general television viewing in 2003, as discussed in footnote 10.

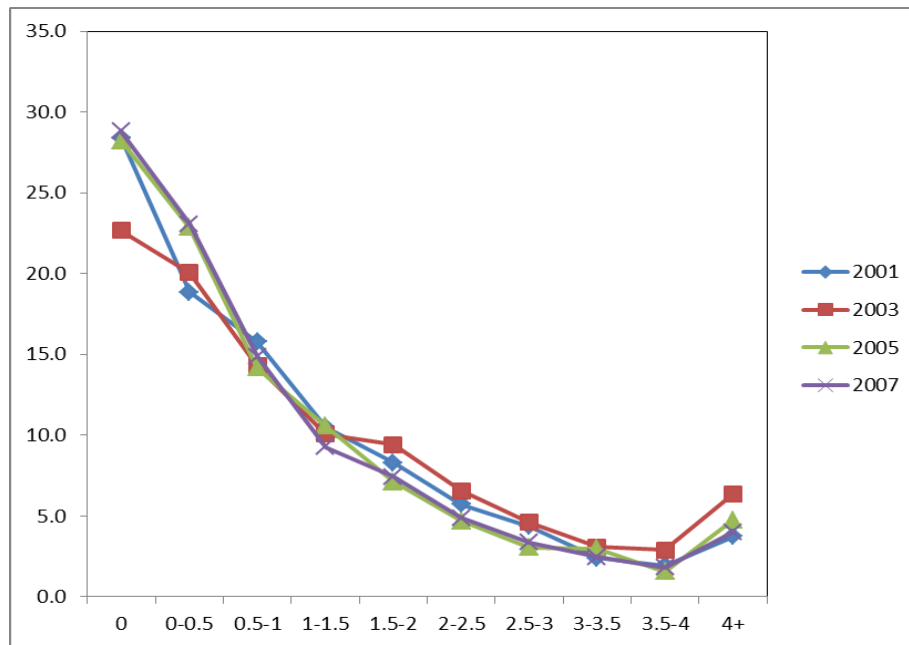


Figure 3. Distribution of Weekday Total News Consumption from 2001 to 2007.

Discussion

This study examined whether the multiplication of available channel options has polarized news audiences into news avoiders and news seekers by using precise measures of television news viewing over seven years in Korea. We found that polarization in TV news viewing across the population is very much in evidence. However, we also found that polarization in television news viewing was well established at an early stage of cable penetration and has remained largely unchanged over time. Even though the number of channels has more than doubled from 2001 to 2007, the level of polarization appears to be almost identical. This result was not what we expected, and it appears to be at odds with the literature on the impact of high choice environments on news viewing.

Why, then, do we see virtually identical patterns in polarization of television news viewing in 2001 and 2007? We consider four inter-related explanations. The first two deal with just how much media choice is actually necessary to trigger polarization. The third deals with patterns of audience availability in Korea, which may or may not generalize to other contexts. The fourth considers the confounding effects of the Internet in Korea.

First, though it is only in the last decade that the Korean media environment has offered viewers as many choices as those in the United States and Western Europe, the introduction of commercial broadcasters and cable channels began in the 1990s. Sample households for this study were cable

subscribers, and the number of channels measured by Nielsen's peplemeter in 2001 was 39. Though a modest count by today's standard, this may have been more than enough channel options to produce a division of news junkies and avoiders arising from individual viewers' content preferences.

Second, the primetime newscasts on terrestrial channels were not scheduled at the same time. This is unlike the situation in the United States, where the major network newscasts are scheduled opposite one another. As Prior (2007) argues, that circumstance effectively enforced exposure in a low-choice environment. In Korea, the primetime news programs of terrestrial channels have been aired in two different time slots (i.e., 8–9 p.m. for SBS and KBS2, and 9–10 p.m. for KBS1 and MBC). Terrestrial broadcasters scheduled drama or non-news offerings when the competing broadcasters delivered news programs, giving those who dislike news at least two readily available alternatives. Even if no other channels were available, these programming strategies of terrestrial broadcasters would have allowed audiences to voluntarily avoid or seek news, contributing to polarized news viewing patterns. Taken together, the first two explanations suggest that very few non-news alternatives need to be available to enable polarized news viewing.

A third possibility is that certain portions of news audiences were simply not available during primetime. Koreans have long workdays, and primetime in Korea peaks much later than it does in other countries. According to a time-use survey conducted by Statistics Korea, 27% of employees and 33.8% of students were not able to watch television during primetime due to work, studying, or commuting (Statistics Korea, 1999). The demographic composition of news avoiders also partially supports this argument (see Table 3). Among the 2001 sample, 64.4% of the news avoiders (i.e., those who viewed no news) were between 10 and 30 years old. Although younger people are known to be less interested in politics and consume less news than older people (Delli Carpini, 2000), it is also plausible that a significant portion of young people who may have had an interest in news or politics just could not watch primetime news programs because of the time constraints of their lifestyle.

Fourth, the stability of television news polarization over the duration of our study cannot be discussed without considering the pervasiveness of the Internet in Korean society. According to the broadband statistics by Organization for Economic Cooperation and Development, Korea is ranked as the highest in household broadband access, with 94.1% of households having an Internet connection (Organization for Economic Co-operation and Development, 2010). Some might argue that the fast adoption of the Internet should have deepened the polarization of television news viewing in 2007, since people had more options to choose from on the Internet in 2007 than they did in 2001. However, if we take into account the fact that the Internet is diffused at a differential pace across the population, the impact of the Internet on news viewing should also be different across the population. In particular, the adoption of the Internet is known to be fastest among the younger generation and the slowest among the older generation (Atkin, Jeffres, & Neuendorf, 1998; Kayany & Yelsma, 2000), thus, examining the changes in the age composition of news junkies and avoiders from 2001 to 2007 may shed some light on the relevance of the Internet on television news polarization.

Table 3 presents the age composition of news junkies (i.e., those people who consume primetime news or cable news channels for more than 3 hours per weekday) and avoiders (i.e., those people who do

not watch any news at all on weekdays) in 2001 and 2007. The most substantial change is that the proportion of news junkies who are over 50 years old had doubled by 2007, whereas the proportion of younger news junkies had decreased substantially. Another important change is that the proportion of news avoiders in their 20s and 30s decreased by 10% from 2001 to 2007. The age composition of news avoiders is almost stable over time, except for slight variation in the proportions of news avoiders in the middle age groups. The results imply that, for those who have a strong preference for news, television news viewing has intensified among older audiences, whereas young viewers use a mixture of media to get news and information. This is also consistent with previous findings of Korean researchers that the younger generation uses a more diverse mixture of media (Rhee, Hwang, & Moon, 2007), and that audiences in their 60s concentrate their television viewing on terrestrial channels, even though they have access to cable channels or other media (Kang & Cho, 2007). Among those who prefer entertainment, whether or not the media environment offers more news options does not actually matter, since they opt not to expose themselves to any news programs, regardless of availability.

Table 3. Age Composition of News Junkies and Avoiders in 2001 and 2007.

	News junkies		News avoiders	
	2001 (N=156)	2007 (N=243)	2001 (N=547)	2007 (N=839)
Under 10	5.1	1.7	22.1	19.4
11-20	2.6	1.6	21.9	27.5
21-30	11.1	1.2	17.9	13.1
31-40	25.6	15.2	21.2	18.0
41-50	26.3	22.2	9.3	13.4
51-60	15.4	25.1	4.9	5.5
Over 60	12.8	32.9	2.6	3.1
Total	100.0	100.0	100.0	100.0

Though this study presents new, and unexpected, findings about news audience polarization, more work remains to be done. Not all the news programs available on terrestrial channels were included in the analysis, due to the ways in which the data were collected. We might have seen somewhat different patterns of news exposure had we taken into account other news programs, as well as public affairs programs. In addition, this study did not have information on people's use of news media on platforms other than TV, and thus could not examine how each news media platform is used as a part of a person's news media diet. Recent studies have taken into account the interrelationship among various news and information outlets (Holbert, 2005; Holbert & Benoit, 2009). For example, Holbert's (2005) conception of

complementary relationships among different media outlets—which he termed as “intramediation”—focuses attention on media connectedness over time. The next step would be to measure total news use across various media platforms, which could help researchers see how each medium either motivates or dampens the use of other news media, as well as whether polarized news consumption patterns still exist when all media are considered.

Despite these limitations, the current study helps us to understand how audiences change their news viewing behavior when they encounter a variety of program options from different news outlets. The findings indicate that a high-choice media environment facilitates an overall erosion of television news viewing. But that average decline masks considerable variation across the population. It appears that only a modest number of channels are needed to attract audience members to entertainment or non-news offerings. Also, once the number is sufficient to trigger polarization, the degree of polarization remains at a stable level, even as the supply of available channels increases. People with no appetite for news only need a small opening to avoid the genre entirely. In doing so, they lose the opportunity to learn about public issues covered in the news. Over the seven years of our study, a steady one-third of the population saw no primetime news, cable news, or public affairs channels. These were generally younger viewers, though their patterns of availability and affinity for the Internet did make it harder to understand just what their appetite for news really is. News junkies consisted mainly of older viewers who depended heavily on television as a medium for news and information.

If we consider the relationship between news exposure and its political correlates (e.g., political knowledge or voter turnout), these patterns of news media use can give us a clue to what implications they might have for Korean society. According to the presidential election white paper published by the Korean National Election Commission, voter turnout in the recent presidential election and the National Assembly Election in Korea was the lowest in history (Korean National Election Commission, 2008). Although our data cannot show that the decrease in voter turnout is directly caused by the decreasing trend of television news viewing, previous research on political effects of media use suggests that news viewing does, indeed, motivate people to participate in politics (Bennett & Iyengar, 2008; Couldry, et al., 2007; Delli Carpini & Keeter, 1996; Eveland, Hayes, Shah, & Kwak, 2005; Holbert, 2005). When a significant portion of people abandon news entirely, it is very likely that they will lose opportunities to learn about important public issues and make their voices heard through various forms of political behavior.

Finally, this study expands our knowledge on audience behavior by examining the field in a different geographic context. It also provides implications to broadcasters and policy makers in Korea, where the government has stressed the social responsibility of the broadcasters and imposed strict programming regulations on both terrestrial and cable broadcasters. Although this study did not examine exposure to all the available news programs, the decreasing trend in weekday news viewing will be a huge disappointment to policy makers who emphasize the public duties of broadcasters. The results will also raise questions about how to deal with fragmented and polarized audience behavior, which seems to be an inevitable consequence of a choice-abundant media environment.

References

- Atkin, D. J., Jeffres, L. W., & Neuendorf, K. A. (1998). Understanding Internet adoption as telecommunications behavior. *Journal of Broadcasting & Electronic Media*, 42(4), 475-490. doi: 10.1080/08838159809364463
- Bae, H.-S., & Baldwin, T. F. (1998). Policy issues for cable startup in smaller countries: The case in South Korea. *Telecommunications Policy*, 22(4-5), 371-381. doi: 10.1016/s0308-5961(98)00016-0
- Bennett, W. L., & Iyengar, S. (2008). A new era of minimal effects? The changing foundations of political communication. *Journal of Communication*, 58(4), 707-731. doi: 10.1111/j.1460-2466.2008.00410.x
- Bergg, D. (2004). Taking a horse to water? Delivering public service broadcasting in a digital universe. In D. Tambini & J. Cowling (Eds.), *From public service broadcasting to public service communications* (pp. 5-15). London: IPPR.
- Chaffee, S., Saphir, M. N., Graf, J., Sandvig, C., & Hahn, K. (2001). Attention to counter-attitudinal messages in a state election campaign. *Political Communication*, 18(3), 247-272. doi: 10.1080/10584600152400338
- Cho, S., & Kang, N. (2009). A study on the change of audience's media consumption and composition in a multimedia environment. *Korean Journal of Journalism & Communications Studies*, 53(1), 233-256.
- Christiansen, T., & Tax, S. S. (2000). Measuring word of mouth: the questions of who and when? *Journal of Marketing Communications*, 6(3), 185-199. doi: 10.1080/13527260050118676
- Couldry, N., Livingstone, S. M., & Markham, T. (2007). *Media consumption and public engagement: Beyond the presumption of attention*. Basingstoke, Hampshire ; New York: Palgrave Macmillan.
- Delli Carpini, M. X. (2000). Gen.com: Youth, civic engagement, and the new information environment. *Political Communication*, 17(4), 341-349. doi: 10.1080/10584600050178942
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, Conn.: Yale University Press.
- Eveland, W. P., Hayes, A. F., Shah, D. V., & Kwak, N. (2005). Understanding the relationship between communication and political knowledge: A model comparison approach using panel data. *Political Communication*, 22(4), 423-446. doi: 10.1080/10584600500311345
- Graber, D. A. (2004). Mediated politics and citizenship in the twenty-first century. *Annual Review of Psychology*, 55(1), 545-571. doi: 10.1146/annurev.psych.55.090902.141550

- Graf, J., & Aday, S. (2008). Selective attention to online political information. *Journal of Broadcasting & Electronic Media*, 52(1), 86-100. doi: 10.1080/08838150701820874
- Gurevitch, M., Coleman, S., & Blumler, J. G. (2009). Political communication - old and new media relationships. *The Annals of the American Academy of Political and Social Science*, 625, 164-181. doi: 10.1177/0002716209339345
- Hamill, L. (2011). Changing times: Home life and domestic habit. In R. Harper (Ed.), *The connected home: The future of domestic life* (pp. 29-57). London: Springer.
- Hindman, D. B., & Wiegand, K. (2008). The Big Three's prime-time decline: A technological and social Context. *Journal of Broadcasting & Electronic Media*, 52(1), 119 - 135. doi: 10.1080/08838150701820924
- Holbert, R. L. (2005). Intramedia mediation: The cumulative and complementary effects of news media use. *Political Communication*, 22(4), 447-461. doi: 10.1080/10584600500311378
- Holbert, R. L., & Benoit, W. L. (2009). A theory of political campaign media connectedness. *Communication Monographs*, 76(3), 303-332. doi: 10.1080/03637750903074693
- Holbert, R. L., Garrett, R. K., & Gleason, L. S. (2010). A new era of minimal effects? A response to Bennett and Iyengar. *Journal of Communication*, 60(1), 15-34. doi: 10.1111/j.1460-2466.2009.01470.x
- Holbert, R. L., Hmielowski, J. D., & Weeks, B. E. (In Press). Clarifying relationships between ideology and ideologically oriented cable TV news use: A case of suppression. *Communication Research*. doi: 10.1177/0093650211405650
- Hollander, B. (2008). Tuning out or tuning elsewhere? Partisanship, polarization, and media migration from 1998 to 2006. *Journalism and Mass Communication Quarterly*, 85(1), 23-40.
- Iyengar, S., & Hahn, K. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, 59(1), 19-39. doi: 10.1111/j.1460-2466.2008.01402.x
- Kanervo, E., Weiwu, Z., & Sawyer, C. (2005). Communication and democratic participation: A critical review and synthesis. *Review of Communication*, 5(4), 193-236. doi: 10.1080/15358590500422585
- Kang, N., & Cho, S. (2007). A study on audience viewing behaviors in a multichannel environment: Focusing on the analysis of 60s' TV using patterns. *Korean Journal of Media Economics and Culture*, 5(4), 7-45.
- Kayany, J. M., & Yelsma, P. (2000). Displacement effects of online media in the socio-technical contexts of households. *Journal of Broadcasting & Electronic Media*, 44(2), 15p. doi: 10.1207/s15506878jobem4402_4

- Korean Communications Commission. (2009). Annual report on the broadcasting industry. Seoul: Korean Communications Commission.
- Korean National Election Commission. (2008). The 17th presidential election white paper. Seoul: KNEC.
- Ksiazek, T. B., Malthouse, E. C., & Webster, J. G. (2010). News-seekers and avoiders: Exploring patterns of total news consumption across media and the relationship to civic participation. *Journal of Broadcasting & Electronic Media*, 54(4), 551-568. doi: 10.1080/08838151.2010.519808
- Meier, H. E. (2003). Beyond convergence: Understanding programming strategies of public broadcasters in competitive environments. *European Journal of Communication*, 18(3), 337-365. doi: 10.1177/02673231030183003
- Nie, N. H., Junn, J., & Stehlik-Barry, K. (1996). *Education and democratic citizenship in America*. Chicago, IL: University of Chicago Press.
- Organization for Economic Co-operation and Development. (2010). OECD Broadband Portal. Retrieved from http://www.oecd.org/document/54/0,3343,en_2649_34225_38690102_1_1_1_1,00.html
- Prior, M. (2007). *Post-broadcast democracy: How media choice increases inequality in political involvement and polarizes elections*. New York: Cambridge University Press.
- Prior, M. (2009). The immensely inflated news audience: Assessing bias in self-reported news exposure. *Public Opinion Quarterly*, 73(1), 130-143. doi: 10.1093/poq/nfp002
- Rhee, J., Hwang, Y., & Moon, T. (2007, April). *The rise of portal media and its role*. Paper presented at the the special seminar of the Korean Association for Broadcasting & Communication Studies, Seoul, South Korea.
- Schejter, A., & Lee, S. (2007). The evolution of cable regulatory policies and their impact: A comparison of South Korea and Israel. *Journal of Media Economics*, 20(1), 1-28. doi: 10.1207/s15327736me2001_1
- Schudson, M. (1998). *The good citizen: A history of American civic life*. New York, NY: Martin Kessler Books.
- Sohn, C., & Yeo, H. (2007). *The South Korean cable television industry* (Rev. ed.). Seoul, Korea: Communication Books.
- Statistics Korea. (1999). Report on the Time Use Survey. Seoul, South Korea: Statistics Korea.
- Stroud, N. J. (2008). Media use and political predispositions: Revisiting the concept of selective exposure. *Political Behavior*, 30(3), 341-366. doi: 10.1007/s11109-007-9050-9

- Stroud, N. J. (2010). Polarization and partisan selective exposure. *Journal of Communication, 60*(3), 556-576. doi: 10.1111/j.1460-2466.2010.01497.x
- Tewksbury, D. (2005). The seeds of audience fragmentation: Specialization in the use of online news sites. *Journal of Broadcasting & Electronic Media, 49*(3), 332-348. doi: 10.1207/s15506878jobem4903_5
- van der Wurff, R. (2004). Supplying and viewing diversity: The role of competition and viewer choice in Dutch broadcasting. *European Journal of Communication, 19*(2), 215-237. doi: 10.1177/0267323104042911
- Vitalari, N. P., Venkatesh, A., & Gronhaug, K. (1985). Computing in the home: Shifts in the time allocation patterns of households. *Communication of the ACM, 28*(5), 512-522. doi: 10.1145/3532.3537
- Webster, J. G. (2005). Beneath the veneer of fragmentation: Television audience polarization in a multichannel world. *Journal of Communication, 55*(2), 366-382. doi: 10.1111/j.1460-2466.2005.tb02677.x
- Webster, J. G. (2008). Structuring a marketplace of attention. In J. Turow & L. Tsui (Eds.), *The hyperlinked society: Questioning connections in the digital age* (pp. 23-38). Ann Arbor: University of Michigan Press.
- Webster, J. G., & Ksiazek, T. B. (2012). The dynamics of audience fragmentation: Public attention in an age of digital media. *Journal of Communication, 62*(1), 39-56. doi: 10.1111/j.1460-2466.2011.01616.x
- Webster, J. G., & Phalen, P. F. (1997). *The mass audience: Rediscovering the dominant model*. Mahwah, NJ: L. Erlbaum Associates.
- Wonneberger, A., Schoenbach, K., & van Meurs, L. (2011). *Tuning out? TV news audiences in the Netherlands 1990-2010*. Paper presented at the the 61st Annual Meeting of the International Communication Association, Boston, MA.