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### THE DEVELOPMENT OF MULTI-CHANNEL TV AND TV NEWS VIEWING: A CROSS-SECTIONAL ANALYSIS OF TV NEWS VIEWING AND NEWS LEARNING IN A BROADCAST-CHANNEL-ONLY AND MULTI-CHANNEL SITUATION

By

Sug-min Youn

### A DISSERTATION

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Mass Media

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#### ABSTRACT

### THE DEVELOPMENT OF MULTI-CHANNEL TV AND TV NEWS VIEWING: A CROSS-SECTIONAL ANALYSIS OF TV NEWS VIEWING AND NEWS LEARNING IN A BROADCAST-CHANNEL-ONLY AND MULTI-CHANNEL SITUATION

By

### Sug-min Youn

This dissertation investigated how the development of multi-channel TV affects TV news viewing and news learning from TV. Based on knowledge gap studies, uses and gratification studies, expectancy value theory, program choice studies, and relevant cognitive psychology literature, the theoretical factors which are related to TV news viewing and news learning from it were identified. Then, the changing nature of the relationships between these factors and TV news viewing and news learning from TV news due to multi-channel TV development was examined.

Since multi-channel TV has been introduced all over the U.S. and multi-channel TV subscription cannot be manipulated, the major analysis of this research was limited to finding cross-sectional differences between broadcastchannel-only TV viewers and multi-channel TV viewers. A cross-sectional telephone survey was executed and obtained a sample size of 208 multi-channel TV subscribers and 95 nonsubscribers.

With regard to the amount of TV news viewing, the results indicate that (a) viewer availability and content gratification expectancy of TV (CGE-TV) which are major facto: situat situat of TV news c viewir develo maximi 1 percei only 3 and th grati TV ne of ne Also, terms news other factors of TV news viewing in a broadcast-channel-only situation become less important in a multi-channel situation, and (b) relative content gratification expectancy of TV (RCGE-TV), channel repertoire, and value perception of news channels emerge as new important factors of TV news viewing. Also, the results showed that multi-channel TV development tends to facilitate "(program type) interest maximization."

The results indicate that (a) multi-channel TV viewers perceive TV as a better news medium than broadcast-channelonly TV viewers in terms of news variety, depth of coverage, and the expectancy of news learning motivation gratification, but contrary to the original expectation (b) TV news viewing has a stronger relationship with the level of news learning in a broadcast-channel-only situation. Also, this study provides substantial evidence that, in terms of the baseline awareness of major news events, TV news viewing is as important as, or more important than, other media exposure.

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### CHAPTER I.

#### INTRODUCTION

### Research Background

For the last decade, one factor which could transform the whole viewership and social effects of TV, has evolved continuously. That factor is the development of multi-channel TV.<sup>1</sup> The phenomenal advancement in video compression and fiber optic communication technology is expected to bring as large as 500 channel TV in the future, even though the expectations on the timing vary due to the rapidly changing industrial and regulative environment (Brown, March 8, 1993). The enormously expanded channel capacity has brought a variety of new TV channels which are geared to the narrowcast strategy such as news, sports, music, and entertainment, etc.<sup>2</sup> In this situation, the

<sup>2</sup>For example, among the multi-channel networks planning to launch within 1994 are "Recovery Net/The Wellness

<sup>&</sup>lt;sup>1</sup> In this dissertation research, the term 'multichannel TV' will be used to denote the new generation of TV which provides many channels besides traditional over-theair broadcast channels. This term is preferred to 'cable TV' since cable is just one means of delivering multichannels. Also, from the viewer's point of view, there is no physical distinction between over-the-air channels and cable channels. In this vein, too, multi-channel TV is a better term than cable TV which usually refers only to the new channels available through cable subscription.



concept of TV viewing characterized by the universal exposure to a set of limited programs provided by a few TV networks is bound to change in various aspects.

Among the various changes in TV viewing, the focus of this dissertation is to investigate how TV news viewing is affected by the development of multi-channel TV. Past studies which explored TV news viewing in a multi-channel situation (Baldwin, Barrett, & Bates, 1992a and 1992b; Baldwin et. al., 1988; Becker et. al., 1983; Gelman, 1983; Grotta & Newsom, 1983; Heeter & Baldwin, 1988; Henke et. al., 1984; Jeffres, 1978a; Reagan, 1984; Webster, 1984; Youn, 1993b) mostly focused on the changes in the amount of broadcast TV news viewing due to multi-channel development. The findings from these studies are far from being consistent. Some researchers (Henke et. al., 1984; Jeffres, 1978a) found that in a multi-channel situation, the amount of broadcast network (ABC, CBS, NBC) news viewing decreased. On the contrary, other researchers (Baldwin et. al., 1988; Becker et. al., 1983; Heeter & Baldwin, 1988; Reagan, 1984; Youn, 1993b) found that TV viewers in a multi-channel situation watched as much as or more network news than TV viewers in a broadcast-channel-only situation. Underlying these inconsistent findings are the differences in research

Channel" for recovering drug addicts, "The Golden American Network" for older Americans and "The Golf Channel" for golfers (Stern, June 7, 1993).

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settings and designs (e.g., data gathering time points, samples, and measurements).

In this vein, Baldwin's et. al. study (1992a), which minimizes the problem of external validity by analyzing long-term changes of TV news viewing based on national TV audience rating data, provides the most comprehensive conclusions about the changes in TV news viewing due to the development of multi-channel TV. Baldwin et. al. hypothesized that in a multi-channel situation (a) the multichannel offerings of non-news programs could divert audiences from network and local broadcast news (the diversion hypothesis) and (b) the head-to-head competition of the 24-hour news networks in national news would erode the broadcast news audience (the competition hypothesis). Baldwin et. al. found that while broadcast network news ratings have not changed much over the years among broadcast-channel-only TV viewers, they have declined continuously among multi-channel TV viewers and dramatically so among premium channel subscribers. This study also found that the decrease of broadcast network news share has a close inverse relationship with the increase of the cumulative 24-hour news viewing share.' Based on this

<sup>&</sup>lt;sup>3</sup>To interpret this as evidence of the competition hypothesis is still not without question. As their study clearly shows, average ratings for 24-hour news has remained quite constant by year (about 1.5 including both CNN and CNN Headline News). Therefore, it is more reasonable to attribute network news viewing erosion to the growth of multi-channel TV penetration (diversion), rather than to the

study, we can draw the following conclusions regarding the influence of multi-channel TV development on the amount of TV news viewing;

(a) Mainly due to diversion effect and probably due to competition effect, broadcast news viewing has been decreasing over the years.<sup>4</sup>

(b) 24-hour news viewing has been increasing mainly due to the steady growth of multi-channel TV penetration.

(c) Therefore, TV news viewing is changing in the direction of watching more diverse news programs, including both broadcast news and 24-hour news programs.<sup>5</sup>

These trends provide a useful picture of the overall changes. However, these trends are just a broad overview of the complicated changes in TV news viewing due to the development of multi-channel TV. Under these general trends, the directions and degrees of changes can vary among TV viewers; some TV viewers may increase the amount of TV

'Since local news is not in a direct competition with 24-hour news, it is less likely to be affected by competition effect.

<sup>5</sup>It is unclear from the past studies, however, whether the overall amount of TV news viewing (including both broadcast news and 24-hour news) has been increasing or decreasing. It is likely that the total amount of TV news viewing has been somewhat constant assuming that the constant growth in 24-hour news viewing has made up the decrease in broadcast news viewing.

viewership increase of 24-hour news (competition). Furthermore, as Baldwin et. al. themselves mention (1992(a), p.654), without knowing how much duplication is in the CNN audience or what proportion of people actually substitute CNN viewing for broadcast network news, it is difficult to estimate the true competition between network news and 24hour news.

news viewing, while some others decrease it. From the past studies, however, it is difficult to find any elaborated discussions about these individual variations in changes. For example, will highly educated and less educated people show different directions and degrees of changes? What would be the case for those who differ in news learning motivations?

Also uninvestigated from the past studies are the changes in news learning from TV news viewing due to the development of multi-channel TV. News learning from TV news viewing in a broadcast-channel-only situation has been extensively investigated by past studies (discussed in Chapter II). However, we do not know what cognitive effect TV news viewing has in a multi-channel situation. For example, will the development of multi-channel TV make TV play a more important role in informing people of important social issues? How will it change the roles of other media?

#### **Research Purposes**

This dissertation will investigate how the development of multi-channel TV affects TV news viewing and news learning from it. First, with regard to the changes in TV news viewing, going beyond describing the overall changes, this study will examine how the TV news viewing of people is affected differently due to the development of multi-channel TV. For this we need to identify the factors which bring

(or sometimes suppres) the differences in TV news viewing. Then, we need to examine how the roles of these factors are different in broadcast-channel-only and multi-channel situations, resulting in the variations in the directions and degrees of changes among different social groups. With regard to the changes in news learning from TV news viewing, too, we need to identify the factors which are related to the cognitive effect of TV news and to examine how the roles of these factors are affected by the development of multichannel TV.

Since multi-channel TV has been introduced all over the U.S. and multi-channel TV subscription cannot be manipulated, the use of repetitive group analysis (the comparison of the same group before and after multi-channel TV subscription) is practically impossible. Therefore, the major analysis of this research is limited to finding crosssectional differences between broadcast-channel-only TV viewers and multi-channel TV viewers.

#### Research Questions and Organization of Dissertation

The major research questions investigated by this dissertation are:

(a) How does the development of multi-channel TV change TV news viewing? (In terms of cross-sectional comparison, what are the major differences between a broadcast-channel-only situation and a multi-channel situation with regard to TV news viewing?)

(b) How does the development of multi-channel TV change news learning from TV news viewing? (In terms of crosssectional comparison, what are the major differences between a broadcast-channel-only situation and a multichannel situation with regard to news learning from TV news viewing?)

In Chapter II, theoretical factors which are relevant to TV news viewing and news learning from it will be explicated and their relationships with these two variables in both broadcast-channel-only and multi-channel situations will be proposed as empirically testable hypotheses. In Chapter III, methodological issues, including the research design and the measurement of major variables, will be elaborated. In Chapter IV, through data analysis, the actual findings and hypothesis test results will be presented. Finally, in Chapter V, the implication of the research findings and hypothesis test results will be discussed, and the directions for improvements through future studies will be suggested.



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## CHAPTER II LITERATURE REVIEW

### <u>TV News Viewing</u>

In the mass media field, major theoretical contributions regarding TV news viewing have been made from three different lines of studies: knowledge gap studies, uses and gratification studies, and program choice studies. The central focus of knowledge gap studies is on how sociostructural variables, particularly socio-economic status (SES), affect the amount of media exposure and learning from it. Uses and gratification studies explicate the relationship between audience needs or motivational factors and media uses. Meanwhile, program choice studies highlight some other important factors such as programming schedule or programming awareness in an actual program choice.

### Knowledge Gap Studies

In 1970, Tichenor et. al (1970) proposed the knowledge gap hypothesis; that is mass media tend to increase the already existing knowledge level differences between the more informed (high SES) and the less informed (low SES).

As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease (Tichenor, Donohue and Olien, 1970: 159-160).

The issue of knowledge gap has brought broad academic attention; according to Gaziano (1983), 58 studies were published by 1983. Underlying this academic interest is the concern that even the ubiquitous and easily accessible mass media news sources tend to aggravate the existing social inequalities.

In knowledge gap studies, "knowledge" denotes a very specific aspect of mass media's cognitive effects -- the recall or understanding of public affairs or science news, which has more or less general appeal, delivered by mass media (Tichenor et. al., 1970).<sup>1</sup> It is not necessarily applied to more audience-specific topics, such as "stock market quotations, sports, and lawn and garden care (Tichenor et.al., 1970, p.160)." Also, "knowledge" concerns the news information originated by mass media such as newspaper or TV, even though it does not exclude interpersonal communication (personal contact) as an important mediator or messenger of this information. In

<sup>&</sup>lt;sup>1</sup>To discuss the more general term "knowledge" is beyond the scope of this study. Also, it is not strongly relevant to the knowledge gap concept which denotes a very specific aspect of mass media's cognitive effects. However, for an extensive discussion on the concept of knowledge, see Machlup, F. (1980 & 1982).

actual measurement level, "knowledge" means the degree to which this news information is recalled or learned.

The knowledge gap, therefore, means the difference in the degree to which the news information of general appeal originated by mass media is recalled or understood. Differences can be found individual by individual. However, the general focus of interest, particularly in terms of the original conceptualization of the knowledge gap hypothesis by Tichenor, et. al., is on the structural gap among different social groups, particularly among groups with different socio-economic status (SES),<sup>2</sup> which is considered as the fundamental organizational structure of modern society (Eichar, 1989; Leptrato & Lewis, 1974; Rossides, 1976; Vanneman & Cannon, 1987). Among various measures of SES, knowledge gap studies have adopted education level as the primary measure.

Background theories of the knowledge gap hypothesis. In discussing the knowledge gap hypothesis, the term "hypothesis" requires special attention. It means that

<sup>&</sup>lt;sup>2</sup>Several studies have criticized the basic orientation of knowledge gap studies focusing on SES. Genova and Greenberg (1978) proposed that knowledge gap comes not from SES but from interest differences. In the same vein, Ettma and Kline (1977) proposed reformulation of the knowledge gap hypothesis based on differences in motivation. Currently, Reagan (1993), raised the same argument by saying that knowledge gap is no more than "Knowledge difference" due to the differences in interest. In this study, the role of these interest or motivational factors will be discussed more in detail with relation to the uses and gratifications studies.

there are theories on which this hypothesis is based. The theories suggested by Tichenor et. al. (1970, pp. 161-162) are as follows:<sup>3</sup>

(a) communication skill. People with more formal education are expected to have the higher reading and comprehension abilities necessary to acquire public affairs or science knowledge.

(b) stored information or existing knowledge. People who are already better informed from prior exposure to the topic through mass media or from formal education itself are more likely to be aware of a topic when it appears in the mass media and are better prepared to understand it.

(c) relevant social contact. Education generally indicates a broader sphere of everyday activity, a greater number of reference groups, and more interpersonal contacts, which increase the likelihood of discussing public affairs topics with others.

(d) Selective exposure, acceptance, and retention of information. Voluntary exposure is often more closely related to education than to any other set of variables. What appears to be selective exposure according to attitudes might often more appropriately be called "de facto" selectivity resulting from educational differences

These original theoretical explanations suggest that there are two basic conditions of the knowledge gap, the differences in the amount of news information exposure and the differences in the amount of learning from actual news

<sup>&</sup>lt;sup>3</sup>Besides the four theories presented here, Tichenor et. al (1970) also included the nature of mass media system. They saw that mass media are geared to the interests and tastes of the higher-status segment and, therefore, tend to increase the knowledge gap. This explanation was excluded here, since this system-level factor is hard to elaborate empirically and is less applicable to the focal medium of this dissertation research, TV, which is targeted to the largest common denominator of audience.

information exposure. The main argument of the knowledge gap hypothesis is that SES tends to satisfy these two conditions of gap creation. First, the amount of news information exposure is likely to be different among different SES groups due to the differences in media content selectivity and social contact. As noted by Samuelson et. al. (1963), since increased formal education indicates an expanded and more differentiated life space, including a greater number of reference groups and more interest/ selectivity in science and other public issues, high SES people are likely to be exposed to more news information. Second, the amount of learning from media exposure is likely to be different among different SES groups due to different communication skill and stored knowledge. Since education increases the communication skill and stored knowledge which facilitate the understanding and retention of news information, a high SES group tends to learn more from the same amount of news exposure.

SES and amount of TV news viewing. Contrary to the original knowledge gap hypothesis, past studies which focused on news learning from TV news have revealed with remarkable consistency that TV news viewing tends to reduce knowledge gap among different SES groups (Atkin et. al., 1976; Becker & Whitney, 1980; Becker et. al, 1978; Galloway, 1977; Israel & Robinson, 1972; Katz et. al, 1977; McClure & Patterson, 1976; Miller & MacKuen, 1979; Nordenstreng, 1972;

Neuman, 1976; Robinson, 1972 and 1974; Robinson & Levy, 1986; Roper, 1985; Shingi & Mody, 1976). Particularly, two aspects of the findings from these studies need special attention: (a) the universal exposure to TV news and (b) the knowledge leveling effect of TV news viewing. First, television news viewing is a universal phenomenon and the amount of TV news viewing is not correlated with education. Both the more educated and the less educated people in society are equally likely to turn on TV news (Israel & Robinson, 1972; Neuman, 1976; Roper, 1985; Tunstall, 1983). Secondly, heavy dependence on TV news raises the knowledge level of the less-educated segments of society closer to the overall average, but at the same time depresses the knowledge level of the highly educated closer to the Newman (1976, p.122) noted these two aspects of average.4 TV news viewing (universal exposure and knowledge leveling effect) as follows:

In comparing the college professor and his construction-worker counter-part, it may be not only that they are equally likely to turn on the news but

<sup>&#</sup>x27;For example, according to the study by the Center for Political Studies of the University of Michigan in 1980 (cited from Robinson & Levy, 1986), for the political information questions, regular news viewers with less than a high school education scored a higher average point than non-viewers, but of those with a college education, heavy news viewers scored a lower average point. A news awareness survey by Survey Research Center of the University of Maryland in 1983 (cited also from Robinson & Levy, 1986) found similar results. For the questions about news figures, TV news viewers among the less educated scored above average, but among college graduates, TV news viewers again scored below average.

that they remember the same amount of what they see ... not only on the lead story of the day and on human interest stories of general appeal but on the rank and file news items ranging from foreign affairs to national politics and issues of ecology.

Interest maximization theory. Therefore, contrary to the basic notion of the knowledge gap hypothesis, past studies show that SES is not related to the amount of TV news viewing (the relationship between SES and news learning will be discussed in the <u>TV News Viewing and News Learning</u> section). Why is this the case? Also, would it be the same in a multi-channel situation?

Jeffres (1978a) suggests answers for these questions by proposing "interest maximization theory." In the context of the knowledge gap hypothesis, Jeffres assumes that high SES and low SES differ in news interest/selectivity. In a broadcast-channel-only situation, however, the differences in news interest/ selectivity between high SES and low SES cannot be linked to the different amount of TV news viewing due to the structurally confining factors such as news program availability and programming schedule. Jeffres proposes that in a multi-channel situation, where people can maximize their program type interests free from these structurally confining factors, high SES TV viewers would increase the amount of TV news viewing while low SES TV viewers would decrease it. The result, he predicted, would be a widening gap in the amount of TV news viewing between high SES and low SES groups.
Jeffres put this idea to a test by comparing the relationships between SES and the amount of TV news viewing before and after multi-channel TV introduction. The result, however, did not support his idea. No significant differences were found in the amount of TV news viewing between different SES groups after multi-channel TV introduction. Therefore, as far as a formal empirical test is concerned, we are left with the conclusion that the development of multi-channel TV does not affect the amount of TV news viewing among different SES groups.

Still, several problems in this study make it difficult to accept this conclusion. Methodological problems such as confounding of the seasonal variation of ratings and control of other extraneous variables weaken the validity of this study (for more detailed critique of this study, see Youn, 1993a). The most serious problem in Jeffres' study, however, is that it was carried out when the development of multi-channel TV was in its infant stage. More specifically, the multi-channel TV in Jeffres' study means eight channel TV including fairly overlapping distant channels. It is questionable whether this small scale channel increase due to the introduction of the infant-stage multi-channel TV really satisfies the basic conditions of interest maximization.

The fully developed multi-channel TV, nowadays, is evaluated as approaching the basic condition of interest

maximization more closely. According to Youn's study (1993a), in a multi-channel situation, a large number of programs in all major program types are available during prime time, compared to a broadcast-channel-only situation (see Tables 1 and 2). During traditional TV news hours (6-7 PM and 11-11:30 PM), multi-channel TV provides plenty of non-news program options, and 24-hour news channels provide abundant news program options during non-broadcast-news hours.

In this situation, with plenty of news and non-news program choice options available around-the-clock, the role of SES in determining the amount of TV news viewing as is predicted by the interest maximization theory is likely to be realized. Put differently, high SES viewers will turn to news programs more often while low SES groups divert to nonnews programs. From this discussion, the following hypothesis regarding the relationship between SES and TV news viewing is proposed:

H1: SES will be positively related to the amount of TV news viewing in a multi-channel situation, while it will not be related to the amount of TV news viewing significantly in a broadcast-channel-only situation.

## Uses and Gratifications Studies

Through uses and gratification studies, the relationship between audience needs or motivations, including news/information needs, and actual media uses has been extensively investigated. As a result, past uses and gratifications studies have identified quite diverse

Table 1 Program Choice	
Options of	
F Broadcast-Channel-	
only TV	
Viewers	

Other	War/Crime	Contest	Classics	Popular Music	Talk/Soap	Comedy	Dramatic Story	Lowbrow Amusement	Educational/Informational	News	Sports	Time Slot program type
1						1				з		6:00-
						1				4		6:30- 7:00
1		2				1				1		7:00- 7:30
	1	1								3		7:30- 8:00
	2					2			-			8:00- 8:30
	2					2			1			8:30- 9:00
	1					1	1		1		1	9:00- 9:30
	1					1	1		1		1	9:30- 10:00
	1					1	1		1		1	10:00
	1					1	1		1		1	10:30
.2	.9	:				1.1	.4	.0	.6	1.1	.4	Mean

<u>Table 2</u> Program Choice Options of Multi-Channel TV Viewers

Other	War/Crime	Contest	Classics	Popular Music	Talk/Soap	Comedy	Dramatic Story	Lowbrow Amusement	Educational/Informational	News	Sports	Time Slot program type
2	-	2	-	ω	•	7	1	-	ω	6	11	6:00- 6:30
4	-	1	1	2	•	сл	1		1	5	1	6:30- 7:00
ω		•	1	1	•	<b>œ</b>	•	-	2	5	1	7:00- 7:30
5	••	ω	•	2	•	<b>ao</b>		2		-	1	7:30- 8:00
3	з		•	2		2	CT	-	2	1	1	8:00- 8:30
2	4	•	•	2	•	ω	5	1	2	1	1	8:30- 9:00
1	2	•	•	ω	•	-	7	1	2	2	2	9:00- 9:30
1	2	•	•	3	•	1	6	1	2	2	2	9:30- 10:00
•	4	•	•	2	1	1	4	1	2	2	2	10:00 10:30
ω	2	•	1	2	1	3	•	2	3	ω	2	10:30 11:00
2.8	2.2	1.0	••	2.2	.2	3.9	3.3	1.0	2.0	3.1	1.4	Mean

(somewhat overlapping) media use needs or motivations (Atkin, 1990; Bantz, 1982; Becker, 1979; Palmgreen & Rayburn, 1979; Palmgreen, Wenner & Rosengren, 1985; Rubin, 1981 and 1983; Rubin, Perse, & Powell, 1985). From these studies a group of motivation factors, more or less overlapping over various studies, have been identified as follows:

(a) Becker (1979): surveillance, vote guidance, excitement, reinforcement, communication, relaxation, alienation, bias of media, and partisanship.

(b) Palmgreen & Rayburn (1979): relaxation, learning about things, communicatory utility, forgetting, passing time, companionship, and entertainment.

(c) Rubin (1983): relaxation, companionship, habit, passing time, entertainment, social interaction, information, arousal, and escaping.

(d) Atkin (1990): enjoyment, killing time, relaxation, general information, companionship, specific guidance for decision making and behavior, reinforcement of attitudes, escaping, interpersonal communication facilitation, and social acceptance.

However, one fundamental distinction of media uses which has very important implications with regard to news content exposure including TV news viewing has appeared with remarkable regularity. In uses and gratifications studies' parlance, this distinction can be summarized as one between content seeking v process seeking.

<u>Content seeking and process seeking</u>. In uses and gratification studies, content gratification and process gratification (Cutler and Danowski, 1980, pp. 269-270), content seeking and media seeking (Jeffres, 1978b), instrumental media use and ritualized media use (Rubin, 1981, 1983, & 1984), and Katz's et. al. (1974) suggestion that audience members can receive gratification from both media content and the exposure situation, all denote the same distinction of two sets of media use motivations. These distinctions are between (a) use of messages for intrinsic values that bear a direct link to particular substantive characteristics of the messages and (b) the use of messages for extrinsic values that do not bear a direct link to particular substantive characteristics of the messages. In this study, the former set of media use motivations will be named as content seeking (motivations) and the later, process seeking (motivations).

Characterizing content seeking is message uses to gain knowledge, increase or reduce uncertainty in personal and social situations, or to support existing predispositions. On the contrary, process seeking, the gratification for which comes mainly from being involved in the process of communication behavior rather than the message content per se, includes a myriad of escape uses and stimulation uses that often involve engagement in entertainment and uses combatting social isolation through connections with mediated culture and its actors.

Past studies (Gantz, 1978; Jeffres, 1978b; Youn, 1993b) found that TV news viewing is related to process seeking as well as content seeking since people tend to watch TV news in the course of TV viewing, as well as for the specific

purpose of news information seeking. However, since the primary objective of TV news programs compared to other nonnews/entertainment programs is to deliver news/information, and since content seeking is the need to obtain news/ information content, it is likely that TV news program viewing is more strongly related to content seeking, compared to other TV programs.

This discussion tends to lead us to the conclusion that those who pursue strong content seeking would watch more TV news. However, strong content seeking would not necessarily lead to TV news viewing, if the evaluation of TV news in gratifying content seeking is low. In this case, they will turn to another medium such as newspaper for which they have better evaluation. Put differently, content seeking denotes "news/information seeking" or "news learning motivations" in general rather than "TV news seeking." Therefore, in order to get at a more elaborate understanding of TV news viewing intention, we need to consider a viewer's evaluation of TV in gratifying content seeking as well as the strength of content seeking per se.

Expectancy value theory. By considering this evaluation factor, expectancy value theory (Atkinson, 1957; Feather, 1959; Fishbein, 1963; Fishbein & Ajzen, 1975; Rotter, 1954; Tolman, 1932) provides a more elaborate theoretical definition and measurement of TV news viewing intention. Although the various theories under this label

differ somewhat in their emphases, all view either behavior, behavioral intentions, or attitudes (or all three) as a function of (a) expectancy (or belief), that is, the probability that an attitude object possesses a particular attribute or that a behavior will have a particular consequence and (b) evaluation, that is, the degree of affect, positive or negative, toward an attribute or behavioral outcome.<sup>5</sup>

<sup>5</sup>The various discussions about expectancy value theory include:

(a) Tolman (1932) - According to Tolman, people learn "expectations," i.e., beliefs that a given response will be followed by some event. Since these "events" can be either positive or negative "reinforcers" (i.e., can have positive or negative valence), his argument essentially is that people will learn to perform (or increase their probability of performing) behavior that they "expect" to lead to positively valenced events.

(b) Edwards' (1954) Subjective Expected Utility (SEU) model - According to this theory, when a person makes a behavioral choice, he will select that alternative which has the highest subjective expected utility. The subjective expected utility of a given alternative is defined in the following equation.

$$SEU = \sum_{i=1}^{n} SP_{i}U_{i},$$

where SEU is the subjective expected utility associated with a given alternative; SP<sub>1</sub> is the subjective probability that the choice of this alternative will lead to some outcome i;  $U_i$  is the subjective value or utility of outcome i; and n is the number of relevant outcomes.

(c) Rosenberg's (1956) Instrumentality Value Model -Rosenberg defined attitude as a "relatively stable affective response to an object" and argued that this attitude is "accompanied by a cognitive structure made up of beliefs about the potentialities of that object for attaining or blocking the realization of valued states" (p. 367). According to him, the more a given "object" was instrumental in obtaining positively valued goals and in blocking negatively valued goals, the more favorable the person's attitude toward the object. This hypothesis is expressed in Fishbein (1963) has made this relationship an explicit part of his theory of attitude which can be described as follows: (a) An individual holds many beliefs about a given object; i.e., the object may be seen as related to various attributes, such as other objects, characteristics, goals, etc. (b) Associated with each of the attributes is an implicit evaluative response, i.e., an attitude. (c) Through conditioning, the evaluative responses are associated with the attitude object. (d) The conditioned evaluative responses summate, and thus (e) on future occasions the attitude object will elicit this summated evaluative response, i.e., the overall attitude.

According to the theory, a person's attitude toward any object is a function of his beliefs about the object and the implicit evaluative responses associated with those beliefs. The central equation of the theory can be expressed as follows:

$$\mathbf{A}_{o} = \sum_{i=1}^{n} b_{i} \mathbf{e}_{i},$$

the following equation:

$$\mathbf{A}_{o} = \sum_{i=1}^{n} \mathbf{I}_{i} \mathbf{V}_{i},$$

where  $I^i$  is instrumentality, i.e., the probability that owould lead to or block the attainment of a goal or value i;  $V_i$  is value importance, i.e., the degree of satisfaction or dissatisfaction the person would experience if he obtained value i; and n is the of goals or value states.



where Ao is the attitude toward some object, o;  $b_i$  is the belief about o, i.e., the subjective probability that o is related to attribute i;  $e_i$  is the valuation of attribute i; and n is the number of beliefs. Because both b and e are variables in the expectancy value equation, attitude is a nonlinear function of b, or of e, if each is taken singly. However, the model is linear when the b x e product is viewed as a variable (Fishbein and Ajzen, 1975, pp. 237-241).

A major assumption of the theory is that only a limited number of beliefs are relevant or salient to a given object or behavior at a given time. The totality of a person's beliefs represents the information that a person has about him(her)self and his/her social and physical environment.<sup>6</sup>

Applications of expectancy-value theory. Two different applications of expectancy-value theory to mass media uses have been provided up to now. One is Galloway and Meek's

<sup>&</sup>lt;sup>6</sup>Fishbein and Ajzen provide a person's attitude toward the supersonic transport (SST) as an example. If this person holds the following beliefs such as (a) SST is an airplane, (b) SST is noisy, (c) SST is not economical, and (d) SST is a pollutant, his/her attitude toward the SST is a function of the strength with which (s)he holds these beliefs and of his/her evaluations of each attribute. The subjective probabilities and evaluations that might have been obtained can be presented as follows.

Belief	b	е	be
airplane	.90	+2	1.80
Noisy	.80	-2	-1.60
Not economical	.60	-1	60
Pollutant	.50	-3	-1.50



(1981) expectancy model of media exposure, and the other is Palmgreen and Rayburn's (1982, 1983) summation model.

(a) Expectancy model of media exposure: Galloway and Meek applied expectancy-value theory to explain the amount of a specific medium exposure. Their idea is expressed by the following equation:

Exposure =  $\Sigma E_i \times V_i$ ,

where  $E_i$  is the strength of expectancy associated with the  $i_{th}$  gratification, and  $V_i$  is the value of the  $i_{th}$  gratification.

The problem in this equation is that media exposure is equated with the attitude toward a medium or intention of using a medium (since the product of expectancy value of a medium is the attitude toward a medium or intention of using the medium). As a result, this model ignores other factors which would affect the actual media exposure besides viewer's attitude or intention.

(b) Summation model of media use intention: By equating expectancy value of a medium with gratification sought (i.e., media use motivation) instead of actual media exposure, Palmgreen and Rayburn (1982, 1983, 1985a, and 1985b) provide an advanced application of value expectancy theory. The relation between a gratification sought and expectancy value of a medium is expressed as the following equation:

 $GS_i = b_i e_i$ ,



where  $GS_i$  = the  $i_{th}$  gratification sought from X (some medium, program, content type, etc.);  $b_i$ =the belief (subjective probability) that X possesses some attribute or that a behavior related to X will have a particular outcome;  $e_i$ =the affective evaluation of the particular attribute or outcome.

Based on this equation of a single gratification sought, they proposed the following summation model;

$$\Sigma GS_i = \Sigma b_i e_i$$
,

where  $\Sigma GS_i$  indicates a generalized orientation to seek various gratifications from a particular source.

Content gratification expectancy of TV (CGE-TV). Palmgreen and Rayburn's model (1982, 1983, 1985a and 1985b; an application of this model is also found in Babrow & Swanson, 1988) provides an important implication in defining and measuring the strength of TV news viewing intention (defined as the sum of various TV news viewing motivations). According to their model, the intention of using TV to satisfy one's news/information needs can be expressed as the sum of the product of each news/information motivation (value) and evaluation (expectancy) of TV in gratifying this motivation.

For a valid application of expectancy value theory to TV news viewing, however, instead of expectancy, value needs to be considered first, even though this does not make any difference in actual computation. Expectancy value theory



was developed to explain one's attitude toward a person, object, etc. Therefore, expectancy comes first. That is, certain characteristics of a person or a thing, which are not changeable, are noticed first. Then, based on the value put on each characteristic, the comprehensive attitude toward that person or thing is decided. In actual program choice process, however, we can expect the opposite process. In other words, it is assumed that a viewer has a certain set of values (motivations) to be satisfied. After that, how well various TV programs can satisfy these values is evaluated.

Then, the first issue with regard to TV news viewing intention is to identify a certain set of values which are related to TV news viewing. From the discussion on content seeking and process seeking, it is likely that TV news viewing is mainly related to content seeking while process seeking is related to non-news program viewing. Then, based on Palmgreen and Rayburn's model, TV news viewing intention will become the sum of the product between the strength of each content seeking motivation and the expectancy of TV in gratifying this motivation.

$$CGE-TV = \Sigma C_i \times E_i,$$

where CGE-TV (content gratification expectancy of TV) indicates a generalized orientation to gratify content seeking from TV;  $C_i$  is the strength of each content seeking



motivation;  $E_1$  is the expectancy of TV in gratifying this motivation.

In the same vein, the process seeking expectancy of TV can be expressed as the following equation.

 $PGE-TV = \Sigma P_i \times E_i$ ,

where PGE-TV (process gratification expectancy of TV) indicates a generalized orientation to gratify process seeking from TV;  $P_i$  is the strength of each process seeking motivation;  $E_i$  is the expectancy of TV in gratifying this motivation.

The total gratification expectancy of TV can be conceptualized as the sum of CGE-TV and PGE-TV.

 $TGE-TV = CGE-TV + PGE-TV = \Sigma G_i \times E_i$ 

where TGE-TV indicates a generalized orientation to gratify various media use motivations from TV;  $G_i$  indicates a general media use motivation item (both content and process seeking);  $E_i$  is the expectancy of TV in gratifying this motivation.

CGE-TV is evaluated as a good indicator of TV news viewing intention in a broadcast-channel-only situation where available program types are relatively limited (especially during traditional TV news viewing hours when few non-news programs are available). In other words, when a viewer has only two choices (i.e., watching TV news or turning off TV), the stronger content seeking and the better the evaluation of TV in gratifying content seeking, the more likely he/she will turn to TV news. From this the following hypothesis is proposed:

H2: In a broadcast-channel-only situation, CGE-TV will be positively related to the amount of TV news viewing.

## Relative Content Gratification Expectancy of TV (RCGE-

TV). In a multi-channel situation, where a number of program types are available besides news programs, a viewer will have three different choices (i.e., watching TV news, watching other programs, and turning off TV). Therefore, CGE-TV may not be a good indicator of TV news viewing motivation. Put differently, in a multi-channel TV situation, even though a viewer persues strong content seeking and the evaluation of TV is good (high degree of CGE-TV), if (s)he persues stronger process seeking and the evaluation of TV in gratifying process seeking is better, (s)he will turn to non-news programs.

More basically, in a multi-channel situation where a variety of program types are available at the same time, a viewer will turn to a program by which he/she can maximize total gratification expectancy. In other words, the intention to watch TV news will depend not on the absolute size but on the relative size of the expectancy value of TV



news compared to those of other programs.<sup>7</sup> Therefore, to estimate the amount of TV news viewing, we need to obtain the expectancy values of all the other programs, which is practically unfeasible.

A more practical and theory-oriented solution regarding this problem, however, is suggested from the conceptual distinction of content seeking and process seeking. As was discussed before, among TV programs, TV news viewing will mainly be related to content seeking, while process seeking will lead to more non-news program viewing in which news/ information delivery is not the primary goal.

Therefore, the strength of TV news viewing intention, that is the relative size of the value expectancy of TV news programs compared to the value expectancy of other programs, can be estimated by computing how large a potion of TGE-TV of a viewer is taken by CGE-TV. If a large portion of TGE-TV is taken by CGE-TV in a viewer's case, then it is expected that he/she has relatively strong expectancy value of TV news programs. On the contrary, if only a small portion of TGE-TV is taken by CGE-TV in another viewer's case, then it is likely that (s)he has relatively weak expectancy value of TV news programs.

<sup>&#</sup>x27;It can be compared to the situation of choosing the best friend among one's friends. Expectancy value equation just provides the attitude toward each friend. To choose the best friend, expectancy values for all the friends need to be measured.

Thus, the relative strength of gratification expectancy of TV news can be replaced by the relative content gratification expectancy of TV (RCGE-TV), which is computed by dividing CGE-TV by TGE-TV.

$$RCGE - TV = \frac{\sum_{i=1}^{k} C_{i}E_{i}}{\sum_{i=1}^{n} G_{i}E_{i}} = \frac{CGE - TV}{TGE - TV} = \frac{CGE - TV}{CGE - TV + PGE - TV}$$

where RCGE-TV indicates the relative strength of gratification expectancy of TV news;  $C_i$  is the strength of the  $i_{th}$  content seeking motivation;  $E_i$  is the evaluation of TV in gratifying content seeking item i; k is the number of content seeking items;  $G_i$  is the strength of the  $i_{th}$  media use motivation;  $E_i$  is the expectancy of TV with regard to the motivation item i; n is the total number of motivation items.

In a multi-channel situation, where plenty of news and non-news programs are available, RCGE-TV, as an indicator of the relative strength of the total gratification expectancy of TV news compared to other TV programs rather than CGE-TV as an indicator of the absolute strength of content gratification expectancy of TV, is estimated as a better predictor of the amount of TV news viewing. Especially, the amount of 24-hour news viewing is expected to be related to RCGE-TV more strongly, since the viewing of 24-hour news channels as specialized news channels is likely to depend more heavily on the relative strength of the news/ information seeking motivations through TV. Therefore, regarding the relationship between RCGE-TV and the amount of TV news viewing, the following hypothesis is proposed:

H3: In a multi-channel TV situation, the amount of TV news (particularly, 24-hour news) viewing will be positively related to RCGE-TV.

## Program Choice Studies

So far we have attempted to specify the relationship of SES and news seeking motivations with TV news viewing in both broadcast-channel-only and multi-channel situations based on knowledge gap studies and uses and gratification studies. Besides this, we can identify several other important theoretical factors which are related to TV news viewing from program choice studies and other multi-channel TV audience studies (Baldwin et. al., 1992(b); Heeter, 1988; Heeter & Greenberg, 1988; Webster, 1983; Webster & Agostino, 1982). These factors include viewer availability, news programming (channel) awareness, channel repertoire and value perception of news programming (channels).

<u>Viewer availability</u>. Since TV news is available only a certain portion of time in a broadcast-channel-only situation, its viewing will heavily depend on whether a viewer can watch TV during TV news hours (Webster & Agostino, 1982). For multi-channel TV viewers, also, viewer



availability will be a crucial factor of deciding TV news viewing with regard to broadcast news viewing. However, this availability will not matter at all in 24-hour news' case (Heeter & Greenberg, 1988), since a viewer can watch it whenever he/she wants to. From this, regarding the relationship between viewer availability and the amount of TV news viewing, the following hypothesis is proposed:

H4: Viewer availability will be positively related to the amount of broadcast news viewing in both broadcastchannel-only and multi-channel situation, while it is not related with the amount of 24-hour news viewing.

News programming (channel) awareness. For broadcastchannel-only TV viewers, news programming awareness will not have strong influence on TV news viewing. However, for multi-channel TV viewers, especially with regard to the 24hour multi-channel TV news, the importance of news programming(channel) awareness in TV news viewing will become significant. With multi-channel TV, the assumption that each time viewers select a program they are aware of and weigh all program alternatives to select a most preferred option is untenable (Heeter & Greenberg, 1988). There are simply too many options. Even on a general basis, multi-channel TV subscribers are not very aware of the different channels available to them, let alone the different programs." It is likely that viewers

<sup>&</sup>lt;sup>a</sup>According to Arbitron Report (1983) cable subscribers are not aware of all the services available to them or even



(particularly multi-channel TV viewers) who have high news programming (channel) awareness are likely to watch news programs more often, and, in turn, this will improve their news programming (channel) awareness. From this, regarding the relationship between news programming (channel) awareness and TV news viewing, the following hypothesis is proposed:

H5: News programming (channel) awareness will be positively related to the amount of 24-hour news viewing.

<u>Channel repertoire</u>. Studies about the multi-channel TV audience (Heeter, 1988; Nielson, 1983; Reagan, 1993; Television Audience Assessment, 1983; Webster, 1983; Webster & Agostino, 1982) have found that multi-channel TV viewers have a limited set of channels that they check and watch regularly and intentionally. This limited set of channels is called a channel repertoire (Heeter, 1988).

According to Webster (1983), who analyzed the viewing shares with and without cable across 24 markets, networks still attract the plurality of viewing share. Pay cable channels attract a 14 to 20 percent share in pay cable

of what service they're watching at any given time (p.13). In door-to-door interviews, viewers were able to correctly identify an average of 9 of 35 available channels by channel number or location on the channel selector and were aware of one additional service of uncertain location. Twenty-three percent of respondents were able to identify only 0-3 channels. Another 23 percent correctly named 14-27 channels, and the remainder identified between 4 and 13.

homes. Distant stations draw a 10 percent share in the largest market and as much as 46 percent in smaller markets. The remaining cable-only channels account for very little viewing time (less than 10 percent). According to Heeter's study (1988), of 35 channels carried, only the three local network affiliates were regularly watched by 50 percent or more of the cable subscribers surveyed. HBO, WTBS, and a local independent were watched by 40-50 percent. Nine of the 22 other channels available only with cable (ESPN, MTV, CNN, USA, etc.) were watched by one-tenth to one-third of viewers. Thirteen cable channels were watched by less than one-tenth of subscribers.

Channel repertoire,<sup>9</sup> as a type of predisposition toward TV channels, is likely to affect TV news viewing of multichannel TV viewers. More specifically, the inclusion of 24hour news channels in channel repertoire is likely to increase the amount of 24-hour TV news viewing. From this, regarding the relationship between channel repertoire and the amount of TV news viewing, the following hypothesis is proposed:

H6: The inclusion of 24-hour news channels in channel repertoire will be positively related to the amount of 24-hour news viewing.

<sup>&</sup>lt;sup>9</sup>In this study, channel repertoire will be defined as channels turned to intentionally. A channel unintentionally viewed in the course of channel flipping cannot be considered as a part of channel repertoire no matter how frequent and regular that kind of viewing happens, since that type of viewing is purely matter of chances affected heavily by channel placement.

Value perception of news channels. Multi-channel TV viewers pay a certain amount of money to get extra channels which are not available to broadcast-only-channel viewers. In other words, multi-channel TV viewers seek extra values in return for their subscription fee. Since multi-channel TV provides a package of channels rather than sells each channel, various value perceptions can be associated with multi-channel subscription. For example, for some subscribers, to receive extra entertainment will constitute the main value, while for some others, to receive extra news/information will be perceived as the main value. In the former's case, the subscribers will increase the amount of entertainment program viewing. In the latter's case, the subscribers will turn to more news programs.

Therefore, the values associated with multi-channel TV will dictate the types of programs mainly viewed from it. Put differently, 24-hour news viewing will be closely related to the value which a subscriber puts on news/ information channels. According to Baldwin et. al. (1992b), from an economic point of view, value for a service should translate into monetary terms. Thus, those who are willing to pay an extra subscription fee for the news/information channels of multi-channel TV will watch 24-hour news more. From this, regarding the relationship between the value perception of news channels and the amount of 24-hour news viewing, the following hypothesis is proposed:

H7: The value perception of news/information channels will be positively related to the amount of 24-hour news viewing.

## TV News Viewing Models

From the discussion so far, we can propose theoretical models regarding TV news viewing in broadcast-channel-only and multi-channel situations respectively (in the latter's case, broadcast news and 24-hour news, respectively). Amount of TV news viewing is necessarily contingent upon several other factors, such as the amount of TV viewing hours, the amount of other media uses, and other demographic factors (age, gender, number of children), besides the major theoretical factors discussed previously. Therefore, these variables will be included as well in the models.

Besides these variables, in a multi-channel situation, broadcast news and 24-hour news can affect each other in both competitive and complementary fashions. Therefore, factors specifically related to 24-hour news viewing (such as 24-hour news channel awareness), including the amount of 24-hour news viewing will be included when we discuss the broadcast news viewing model in a multi-channel situation. In the same vein, the amount of broadcast news viewing will be included in the 24-hour news viewing model.

<u>Broadcast-channel-only situation</u>. In a broadcastchannel-only situation, TV news is available only during limited time. Also, during TV news viewing hours only a few program type options are available except news programs,



which makes TV news viewing a compulsive behavior unless a viewer decides to turn off TV. Therefore, as was hypothesized before, the most important factor with regard to TV news viewing will be the structural constraining factor of viewer availability. Put differently, the amount of TV news viewing in a broadcast-channel-only situation will mainly depend on whether a viewer can watch TV during TV news hours.

Also, since TV news viewing is almost compulsory once a viewer decides to watch TV, the amount of TV news viewing will depend on TV news viewing intention measured by the absolute strength of content gratification expectancy of TV, rather than the relative strength of gratification expectancy of TV news programs compared to those of other TV programs. Therefore, CGE-TV will be positively related to TV news viewing.

From this discussion, the theoretical model regarding the amount of TV news viewing in a broadcast-channel-only situation is proposed as Figure 1.

<u>Multi-channel situation</u>. In a multi-channel situation compared to a broadcast-channel-only situation, a different set of theoretical factors are likely to be related to TV news viewing. First, with regard to broadcast news viewing, it is important to consider two major differences of a multi-channel situation compared to a broadcast-channel-only situation; (a) other non-news program types are widely



<u>Figure 1</u>. The Theoretical Model of TV News Viewing in a Broadcast-Channel-Only TV Viewing Situation



available during traditional TV news hours and (b) 24-hour news is available as an alternative or complement to broadcast news. Since the availability of broadcast news is still limited to a certain portion of hours, viewer availability is likely to be one of the most influential factors. However, since broadcast news viewing is no longer compulsory, as is the case in a broadcast-channel-only situation due to the two points above, a weaker relationship between news availability and the amount of broadcast news viewing is likely to be observed.

Meanwhile, the decrease of the influence of viewer availability factor is likely to introduce changes in the influences of audience factors such as SES and TV news viewing intention. As was hypothesized before, with regard to TV news viewing intention, since broadcast news viewing is likely to happen after comparing various TV program options, the amount of broadcast news viewing will depend on how strong the gratification expectancy of TV news is compared to those of other TV programs, rather than the absolute strength of content gratification expectancy of TV. Therefore, RCGE-TV as a better indicator of TV news viewing intention than TGE-TV is expected to be positively related to the amount of broadcast news viewing in a multi-channel situation. Also in a multi-channel situation, according to interest maximization theory, high SES viewers are likely to stay with broadcast news, while low SES viewers will divert


to non-news programs. Therefore, SES is likely to be related positively to the amount of broadcast news viewing. From this discussion, the theoretical model regarding the broadcast news viewing in a multi-channel situation is proposed as Figure 2.

With regard to 24-hour news, the roles of the factors considered in broadcast news viewing are expected to change. First of all, as was hypothesized before, news availability which is a dominant factor of broadcast news viewing in both broadcast-channel-only and multi-channel situations is no longer likely to be a significant factor, since 24-hour news viewing is available around-the-clock. Meanwhile, audience factors such as SES and TV news viewing intention (RCGE-TV) will become more significant.

Besides, new theoretical factors which are not relevant to broadcast news viewing are expected to become important with regard to 24-hour news viewing. As was discussed before, these factors include news channel awareness, channel repertoire, and the value perception of news channels. These factors are expected to be positively related to the amount of 24-hour news viewing. From this, the following model (Figure 3) is proposed with regard to 24-hour news viewing.



Figure 2. The Theoretical Model of Broadcast News Viewing in a Multi-Channel Situation



Figure 3. The Theoretical Model of 24-hour News Viewing

#### TV News Viewing and News Learning

So far, the relationship between various theoretical factors and TV news viewing in both broadcast-channel-only and multi-channel situations has been discussed. In this section, the discussion will focus on the changing nature of news learning from TV news viewing due to the development of multi-channel TV.

If TV news were the only source of news learning, then a simple cross-sectional comparison of news learning from TV news viewing (measured by the relationship between the amount of TV news viewing and news knowledge level) among multi-channel TV viewers and broadcast-channel-only TV viewers would show us exactly how multi-channel TV development would affect news learning from TV news viewing. However, to make the comparison more complicated, there are many other factors which affect news learning (e.g., SES, news/information seeking motivation, and exposure to other news sources, etc.). Furthermore, those who subscribe to multi-channel TV and those who do not cannot be equated to the experimental and control groups which differ only in this multi-channel subscription factor. Actually, past studies which compare multi-channel TV subscribers and nonsubscribers (Becker et. al, 1983; Collins et. al, 1983; LaRose & Atkin, 1988; Metzger, 1983; Rothe et. al, 1983; Sparkes, 1983; Sparkes & Kang, 1986) suggest that these two groups might differ in various demographic and media use

aspects, even if the findings are somewhat inconsistent across studies.

Therefore, in examining the relationship between TV news viewing and news learning in broadcast-channel-only and multi-channel situations, we need to consider these factors of variation in news learning. In this vein, this study will include SES, news learning motivation, other media exposure, and other demographic variables besides TV news viewing.

#### Socio-Economic Status (SES)

One of the most extensively discussed factors (mainly by knowledge gap studies) of news learning is SES, which is primarily measured by education level. As was discussed before, Tichenor et. al. (1970) hinted that communication (cognitive) skill and prior knowledge are major theoretical factors which link SES to news learning. More elaborated investigation on these factors, however, is provided from cognitive psychology literature related to human information processing rather than knowledge gap studies.

SES and cognitive skill. The most important characteristic of human information processing system is that it is limited in capacity (Broadbent, 1958; Navon & Gopher, 1979; Norman & Bobrow, 1975; Posner, 1978). Processing capacity, or alternatively, cognitive capacity, is defined as "the limited pool of energy, resources, or

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fuel by which cognitive processes are mobilized and maintained" (Johnston & Heinz, 1978, p.422).

Studies on human information processing (Bransford & Johnson, 1972; Britton et al., 1979; Britton & Price, 1981; Dooling & Lachman, 1971; Gardner & Schumacher, 1977; Kalsbeek & Sykes, 1967; Navon & Gopher, 1979; Norman & Bobrow, 1975; Sperling & Melchner, 1978; Tyler et al., 1979) have identified two classes of message variables which impose demands on the cognitive processing capacity: semantic and structural.<sup>10</sup> Semantic variables are related to the meaning or interpretation of the text. In contrast, structural variables are largely independent of text content. For example, the arrangement of text ideas into phrases and sentences (i.e., syntax) and the kinds of words chosen to express content (i.e., diction) are structural

<sup>10</sup>Perfetti (1979) provides a more elaborated structural-semantic processing level distinction as follows.

Level	Information to	Example	Characteristic
	De wepterented	The old man blocked his path.	
prelinquaitic	Acoustic patterns	2  3  2  2  2  3(-)	vocal quality
	·····	18 + 19 + 19 + 19 + 19 + 18	(e.g., voice intensity or pitch)
phonological	phonemic seg- ments/hierar- chically includes suprasegmentals of 1	/6iy owld man blakt hiz pm0/	phonene sequences (e.g., consonant- vowel
syntactic	superficial con- stituents; hier archically includes 2	S(NP(The(old man)))(VP(blocked (his path)))	constituent sequences (e.g., verba- tim phrases)
propositional	basic semantic relations	CAUSE(Agent: X(PLACE (Instrument: 3, Object:O, Location: Path of Y)))	local seman- tic relations (e.g., actions
referential	identification of referential constituents	<pre>BX [(X,man) (X, old)] BY [Y,male]</pre>	references (e.g., names, places)
thematic	thematic; role of referential constituents	<ul> <li>a) The old man (blocked an intruder's path)</li> <li>b) Siegfried (had his path blocked b) an old man</li> </ul>	connections with text (e.g., theses)
functional	intentions, motivations, deleted and generalized propositions	a) A confrontation existed b) Siegfried faced possible injury	connections with text and nontext knowledge (e.g., scripts

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aspects of text. Structural variables specify the forms that express the propositional content.

Past studies (Bransford & Johnson, 1972; Britton & Price, 1981; Briton et. al, 1979; Dooling & Lachman, 1971; Gardner & Schumacher, 1977; Kalsbeek & Sykes, 1967; Navon & Gopher, 1979; Norman & Bobrow, 1975; Sperling & Melchner, 1978; Tyler, et al., 1979) found that cognitive capacity allocated to the structural aspects of a message does not have an effect on learning, while cognitive capacity allocated to the semantic aspects of a message does. More specifically, when messages vary in structure (but not in semantic content), the learners allocate more capacity to the text with more complex structure. Since this capacity is allocated to the structural aspects of the text, learning of the semantic content is less likely (Britton et. al., 1979; Britton & Price, 1981). On the other hand, when texts vary in semantic content (but not in structure), the learners allocate more capacity to the text with more semantic content. In this case, since the capacity is allocated to the meaning of the text, increased learning of the semantic content would be expected and has been found (Bransford & Johnson, 1972; Dooling & Lachman, 1971; Gardner & Schumacher, 1977; Tyler et al., 1979).

Therefore, the amount of learning from a message depends on the level to which a person can process the message (level of processing). As Greeno (1977, p.12)

mentions, difficulty in decoding at the level of words and small phrases can cause a great deal of an individual's processing capacity to be used there. When that occurs, there is less capacity left for the essential task of integrating the concepts of sentences into meaningful representations, and the propositions of a story into a meaningful structure.

By means of instruction and practice (repetition), however, the capacity demand for structural aspects of the text can be kept within acceptable limits. It has been suggested that some component reading skills can approach automatic levels of performance (LaBerge & Samuels, 1974; Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). As Huey (1968) remarked, repetition progressively frees the mind from attention to details and reduces the extent to which consciousness must concern itself with the process.<sup>11</sup>

These discussions on cognitive capacity, levels of processing, and the role of instruction and practice provide the baseline explanation on the relationship between SES and news learning. Education (and other factors such as broad social contacts) can be compared to instruction and practice which enhance the levels of processing. In other words,

<sup>&</sup>lt;sup>11</sup>For example, phonological analysis is automatic. This does not mean that phonological information is easy to remember. It means that it can be done without disrupting other processing. Thus, a subject attending to syntax will automatically process phonology. But a subject attending to phonology will not necessarily automatically process syntax (Perfetti, 1979, p.173).



education will facilitate the processing of structural aspects of mass media messages and therefore reduce the capacity demand for them. Therefore, it is likely that those who get more education (high SES) will be able to allocate more cognitive capacity to the semantic content of messages and get more learning from them. On the contrary, for the low SES people, structural aspects of messages are likely to demand more allocation of cognitive capacity, which would result in less capacity allocation for semantic content of the message. Therefore, it is generally expected that they get less learning than high SES people do from the same message.

SES and prior knowledge. Another group of human information processing studies (Anderson et. al., 1977; Bever, 1970; Kintch, 1979; Salomon, 1979; Thorndyke, 1977) have identified that in the acquisition of new knowledge prior schemata or internal representations<sup>12</sup> play an

<sup>&</sup>lt;sup>12</sup>Schemata or internal representation (mental representation) means symbols, schemas, images, or ideas which are the outcomes of the active interactions between built-in mental structure and the outside nature. The most important aspect of modern cognitive sciences is the configuration of mental representation as the main domain and agenda for systematic cognitive investigation. This concept is hardly without controversies. No consensus has been reached regarding the best ways of conceptualizing mental representations. Behaviorists and neuro-scientists question this concept itself. However, current cognitive psychologists widely accept this concept, with the belief that the investigation of organic mechanism or algorithm related to mental phenomena can be rightly directed and interpreted only when the ultimate product and goal of these mechanisms or algorithms, is configured as mental representation (Gardner, 1985).

important role. According to Salomon (1979, p. 90), a coded message that corresponds less well to one's schemata, or internal representations, requires more mental effort for its recoding. In other words, such a message requires more, and less well-mastered, mental elaborations. Kintsch (1977) notes that coding elements that deviate from one's anticipatory schemata require skills of translation in which one is not proficient, thus leading to difficulties, errors, and variations among individuals. For example, with regard to the comprehension of stories, usually people tell a story in its natural order, and assuming they do so, the listener can disregard the cues indicating the order of events. However, when the story deviates from the natural order of events, the listener must use the linguistic structure to recover the natural order (Kintch, 1977, p.315).

Making a similar point, Anderson and others (1977, p.377) mention that distortions and intrusions will appear only where there is a lack of correspondence between the schemata embodied in the text and the schemata by which the reader assimilates the text. Bever (1970) found that in order to derive meaning from verbal messages, the listener uses mainly semantic strategies and performs syntactic analyses only when necessary. And such analyses are necessary when a discrepancy between external and internal modes is experienced. Thorndyke (1977) reports a study in which the effects of deleting the grammatical orderliness of

a story were investigated. When the theme line was deleted from the story, recall dropped from 80 percent to 58 percent. So did comprehension. Perfetti and Goldman (1974) also found that recall of a sentence was higher when it was part of a paragraph than when it was in isolation. Other studies also found that greater context produces less processing time unless the subject is explicitly required to make context judgments during encoding (Dooling, 1972; Mistler & Lachman, 1972).<sup>13</sup>

These discussions on prior knowledge provide another important explanation on the relationship between SES and news learning. The gap in prior knowledge among different SES groups (Tichenor et. al., 1970) can be interpreted more exactly as the differences in schemata or internal representations (symbols, schemas, images, and ideas) rather than the differences in the amount of issue-specific knowledge, since education would affect the whole configuration of these mental phenomena rather than increase the level of a specific knowledge (public affairs knowledge). It is likely that higher education is likely to enrich the prior internal representation level (richer symbols, schemas, images and ideas about the society). Therefore, for high SES people, news information will have

<sup>&</sup>lt;sup>13</sup>Another term which denotes the role of prior schemata or internal representation in receiving new knowledge studies is "top-down" processing (Treisman, 1979, p.303). In this vein, the role played by the communication (cognitive) skill is called, the "bottom-up" processing.

fewer coded messages that correspond less well to their schemata, or internal representations. Thus, they are likely to process news information in higher levels. However, for low SES people, news information will correspond less well to their internal representation. Therefore, they will get less learning from it compared to their higher SES counterparts.

From this discussion, it is expected that SES is significantly related to news learning. Put differently, high SES people are likely to learn more about news stories even when they are exposed to the same amount of news content through the same media due to the function of cognitive skill and prior knowledge (internal representation).

H8: SES will be positively related to news learning.

### News Learning Motivations

Besides SES, another factor which has been extensively discussed by past studies (Becker, 1979; Gantz, 1978; Genova & Greenberg, 1979; Jeffres, 1978b; Palmgreen & Rayburn, 1979; Palmgreen, Wenner & Rosengren, 1985; Rubin, 1981, 1983, and 1984; Rubin, Perse, & Powell, 1985) with regard to news learning is motivations. From these studies, a significant relationship between motivations and actual news learning has been found. For example, Genova and Greenberg (1979) found that news interest (i.e., individualized news seeking motivation) rather than SES causes a bigger gap in news knowledge. Gantz (1978) found that there is a significant relationship between types of TV news viewing motivations and amount of news recall. According to his study, those who mainly sought information from TV news viewing showed significantly higher recall than those who mainly sought entertainment.

In deciding the motivations which are closely related to news learning (news learning motivations), the distinction of content seeking and process seeking again provides a very useful conceptual guide. As was discussed before, content seeking is a set of motivations to gain knowledge, increase or reduce uncertainty in personal and social situations, or support existing predispositions. On the contrary, process seeking is a set of motivations to escape from reality, to get stimulus or entertainment, and to overcome social isolation through mediated culture and its actors.

Therefore, from these two sets of motivations, it is expected that content seeking motivations are directly related to news learning.<sup>14</sup> Put differently, the stronger a person is motivated to gain knowledge, reduce uncertainty,

<sup>&</sup>lt;sup>14</sup>Content seeking should not be confused with (relative) content gratification expectancy of TV. Content seeking denotes news learning (seeking) motivations, the gratification of which is not necessarily confined to a specific medium use, while (relative) content gratification expectancy of TV means the intention of using TV (a specific medium) to gratify these motivations.



or support existing predispositions, the more he/she is likely to learn about important social issues. From this discussion, the following hypothesis is proposed:

# H9: Content seeking (news learning motivation) will be positively related to news learning.

#### TV News Viewing

The dominant conclusion from past TV news studies (Becker & Whitney, 1980; Booth, 1970; Browne, 1978; DeFleur et. al., 1992; Findahl & Hoijer, 1975 and 1985; Katz, Adoni, & Parness, 1977; McClure & Patterson, 1976; Newman, 1976; Nordenstreng, 1972; Robinson et. al., 1980; Robinson & Levy, 1986; Stauffer, Frost, & Rybolt, 1981; Stern, 1973; Wilson, 1974) is that TV news viewing has little effect in news learning. Two major findings from past studies support this conclusion.

The first evidence of little news learning from TV news viewing comes from those studies which investigated the degree of news recall just after TV news viewing (Katz, Adoni, & Parness, 1977; Neuman, 1976; Nordenstreng, 1972; Robinson et. al., 1980; Stern, 1973; Wilson, 1974). Throughout these studies, researchers found that the audience could recall only a limited amount of information, or none at all, after viewing television news programs. For example, Neuman (1976) discovered that half of his subjects could not recall a specific news story unaided. Katz, Adoni, and Parness (1977) found that one fifth of television viewers could not spontaneously recall even one item. Even in an experimental setting, Wilson (1974) found that the average viewer failed to retain 79 percent of the information contained in a fictional television news story.

The second evidence of little news learning from TV news viewing comes from studies which compared news knowledge level of TV news dependents and newspaper dependents (Becker & Whitney, 1980; Brinton & McKown, 1961; Browne, 1978; McClure & Patterson, 1976; Robinson, 1974, 1975). For example, Robinson (1974) found that those who depended on television were less knowledgeable about Watergate scandal than those who depended on the newspaper. In another study (1975), Robinson found that those who relied on television for political information were more confused and cynical about politics than those who relied on other media. Becker and Whitney (1980) who studied the effectiveness of newspapers and television to inform residents of central Ohio about political news found that newspaper dependent people knew more about local issues, local government officials, and national affairs, while the findings for television dependent people were just the reverse.

<u>Re-interpretation of the evidence from past studies</u>. These findings from past studies tend to lead us to conclude that TV news viewing has little effect on news learning. However, when we examine the findings from past studies more

closely, we can arrive at quite a different interpretation for them.

(a) Weak recall from TV news viewing: Cognitive psychology research shows that a rapid loss of information about surface features of presentation occurs when the context is similar to that of previous learning episodes (Weisberg, 1980). This loss seems closely related to the assimilation of the text information into existing knowledge structures (Clifton & Slowiaczek, 1981; Kintsch, 1976). News learning can be viewed primarily as the same cognitive process -- semantic abstraction of news information into existing knowledge structures. Then, it is expected that TV news viewers will show a poor recall level of surface or episodic features. For example, requests to recall material seen on a particular occasion (e.g., "What was on the news tonight?" is expected to be relatively ineffective (Berry, 1983). In this vein, it may be quite misleading to attribute the the poor recall level of TV news found from past studies to the little cognitive effect of TV news.<sup>15</sup>

(b) Knowledge level differences between TV news dependents and newspaper dependents: According to media

<sup>&</sup>lt;sup>15</sup>This provides one explanation why different SES groups do not show differences in the amount of news learning. Since the measurement of news learning in these studies did not tap into the differences in semantic learning which are closely related to SES (different cognitive skill and prior knowledge), but the differences in recall of episodic features, which have little theoretical link to SES, it is rather natural that no significant learning gap between SES groups were found.

dependency studies (McDonald & Reese, 1987; McLeod & McDonald, 1985; McDonald, 1983), media dependency or reliance is an indicator of the qualitative orientation of audience members toward current events news and information. In this vein, television news dependents are generally those who have a low level of orientation toward current news events. In other words, television may become the chief source of news for TV news dependents, because there are often times when it is difficult to avoid television news if one is watching television.

Therefore, it is problematic to interpret the findings from past studies that TV news dependents show less knowledge level than newspaper dependents as the evidence of little news learning from from TV news viewing. Put differently, the differences in news knowledge level between TV news dependents and newspaper dependents can be attributed to the differences in general orientation toward news/information rather than the medium factor itself.<sup>16</sup>

<sup>&</sup>lt;sup>16</sup>This provides an important re-interpretation of another major evidence of the little knowledge gap effect of TV news. The difference in news interest/ selectivity is one of the crucial factors which brings the variability of news knowledge among different SES groups. To examine the relationship between SES and news knowledge among TV news dependents is to examine the effect of SES on the news knowledge level, controlling this very factor of variability due to SES difference. Furthermore, it is possible that high SES TV news dependents might include the segment of high SES people who have particularly little interest in news information while low SES TV news dependents represent those who have average or above-average news interest among low SES people. This may be why low SES TV news dependents show a higher level of news knowledge compared to a low SES

This re-interpretation of the findings from past studies, leads us to question the common belief regarding little news learning from TV news viewing. It might be true that TV news is not as effective as other media such as newspaper in news learning (DeFleur et. al., 1992). Still, the actual news learning effect from TV news viewing seems to be too much underestimated.

Role of TV news in news learning in broadcast-channelonly and multi-channel situations. Considering the fact that news learning from TV news viewing may not be so limited as is generally perceived, we can now turn to the discussion of how the relative role of TV news viewing in news learning will be different in broadcast-channel-only and multi-channel situations.

In a broadcast-channel-only situation, TV news is composed of a relatively limited amount of news information, the major content of which is significantly overlapped with other news media content. Therefore, by the time viewers watch evening TV news, they may be quite familiar with most of TV news stories already. Still, since TV news viewing during TV news hours is almost compulsory and there exists little selectivity among news stories, no matter how redundant the news information is, viewers have <u>little</u>

group average, while high SES TV news dependents show a lower level of news knowledge compared to a high SES group average in the 1983 University of Maryland survey and 1980 University of Michigan survey (Robinson & Levy, 1986).

choice but to watch TV news unless they decide to turn off TV.

Therefore, the relationship between the amount of TV news viewing and news learning in a broadcast-channel-only situation is likely to be affected (reduced) by ceiling effect. Ceiling effect means that variability of a variable (for example, learning from TV news) is not limitless but has an upper or lower limit (ceiling).<sup>17</sup>

However, in a multi-channel situation, viewers have many different news program options at the same time, and news viewing during TV news hours is not even compulsory. Therefore, if they find a TV news program quite redundant or superficial, viewers can always turn to other news programs which they perceive as better, or non-news programs if no news programs are satisfactory. Therefore, in a multichannel situation, news learning from TV news viewing is not likely to be affected (reduced) by ceiling effect so much as is the case in a broadcast-channel-only situation.

<sup>&</sup>lt;sup>17</sup>Shingy and Mody's study (1976) on the effect of educational TV in rural Indian villages provides a good example of ceiling effect. They found that the more frequent a farmer's contact with village organizations and change agents, and the larger his ownership of agricultural implements, the less information was gained from the lowceiling educational TV programs.

It should be noted that the notion of ceiling effect here is mainly applied to the cognitive dimension (i.e., news information content) of TV news. It is not applied to the affective dimension (i.e., vivid and rich visual content) of TV news.

The fact that ceiling effect is minimal in a multichannel situation is likely to affect both (a) viewers' evaluation of TV news, and (b) the role of TV news in news learning. First, with regard to viewers evaluation of TV news, TV viewers in a multi-channel situation will conceive TV news as providing more variety and in-depth news stories compared to TV viewers in a broadcast-channel-only situation. Also, TV viewers in a multi-channel situation are likely to evaluate TV as gratifying various news viewing motivations better (expectancy of TV to gratificy content seeking) than TV viewers in a broadcast-channel-only situation. From this, the following set of hypotheses regarding the perception of TV as a news medium are proposed:

H10: Multi-channel TV subscribers will perceive TV news as providing more variety in news stories than nonsubscribers.

H11: Multi-channel TV subscribers will perceive TV news as providing more in-depth news stories than nonsubscribers.

H12: Multi-channel TV subscribers' evaluation of TV in gratifying news learning motivations (content seeking) will be higher than non-subscribers.

Secondly, since ceiling effect does not affect news learning from TV news viewing in a multi-channel situation as much, the amount of TV news viewing in a multi-channel situation is expected to have a stronger effect on news learning. Especially, 24-hour news viewing is likely to have a stronger relationship with news learning than broadcast news viewing, since 24-hour news will be less affected by the ceiling effect. Therefore, with regard to the relationship between the amount of TV news viewing and news learning, the following hypotheses are proposed:

H13: The amount of TV news viewing will be related to news learning more strongly in a multi-channel situation than in a broadcast-channel-only situation.

H14: In a multi-channel situation, the amount of 24hour news viewing will be related to news learning more strongly than the amount of broadcast news viewing.

#### Other Factors

So far, the theoretical relationships of SES, news learning motivations, and the amount of TV news viewing with news learning have been discussed. Besides these, news learning is contingent upon many other factors. This study will include the amount of other news media uses and other demographic variables as these factors.

Other news media uses. Other news media such as newspaper, radio, and interpersonal communication is likely to affect news learning. It is likely that the more frequently a person uses these media, the more news learning (s)he will achieve.

<u>Demographic variables</u>. This study will include two major demographic factors, age, gender, and household income which have been frequently reported as having a significant relationship with news learning (e.g., Gantz, 1978).

#### News Learning Model

From the discussion so far, we can propose a theoretical model of news learning (Figure 4) which includes TV news viewing as a factor. The role of TV news in news learning, symbolized by the link between these two variables, is likely to be affected by the other factors included in this model as well as the development of multichannel TV. However, if the influences of other factors of news learning are assumed to be constant in broadcastchannel-only and multi-channel situations, the relationship between TV news viewing and news learning is likely to become stronger in a multi-channel situation.



Figure 4. The Theoretical Model of News Learning

#### CHAPTER III.

#### RESEARCH METHODOLOGY

#### Introduction

This chapter provides an overview of the data collection and analytical procedures employed in the present study. Briefly stated, after the measures of key variables were constructed, a telephone survey was executed to collect data. All interviews were conducted from a central supervised location by highly trained interviewers for a three week period; 303 interviews were completed. The survey data were analyzed using the Statistical Package for Social Sciences (SPSS) program. A series of analytical techniques, including Pearson's correlation, multiple regression analysis, chi-square test, and t-test were utilized.

#### Measurement of Key Variables

For this study, the following variables need to be measured: SES (socio-economic status), content seeking and process seeking, content gratification expectancy of TV (CGE-TV) and relative content gratification expectancy of TV (RCGE-TV), viewer availability, news channel awareness, channel repertoire, value perception of 24-hour news

channels, amount of TV news viewing, amount of other media exposure, and level of news learning.

#### Socio-Economic Status (SES)

As is the case in most mass media studies, education level was adopted as the primary indicator of SES. To measure education level, eight different hierarchical levels of education were constructed; (a) grade school only, (b) high school not completed, (c) high school graduate, (d) vocational or technical school, (e) some college, (f) college graduate (BA, BS), (g) post graduate work, and (i) graduate degree (MA, MS, PhD).

#### Content Seeking and Process Seeking

In order to construct the measures of content seeking (motivations) and process seeking (motivations), various media use motivation statements, which were constructed by past uses and gratification studies, were reviewed. From this, two opposite-direction scales, composed of four 5-point items, were constructed for content seeking ( $C_i$ ) and process seeking ( $P_i$ ), respectively. First, content seeking was measured by the following four items:

(a) I try to make myself a more knowledgeable person from what I read or view.
strongly agree 1 2 3 4 5 strongly disagree
(b) I am the type of person who feels left out if I'm not familiar with what's going on in society.
(c) It is important to me to have well-informed

(c) It is important to me to have well-informed opinions about controversial issues.

(d) I like to hear the ideas of others in order to have more objective ideas of my own.

In this study, content seeking was equated conceptually to news learning motivation. Therefore, the sum of these four item scores ( $\Sigma C_i$ ) is interpreted as a measure of the strength of news learning motivations. Process seeking was measured by the following four-item scale:

(a) If I can be entertained from what I read or view, I don't care much about the informational content. strongly agree 1 2 3 4 5 strongly disagree
(b) I tend to turn to what I read or view just to pass the time.

(c) I tend to avoid complicated material that I have to try hard to understand.

(d) I tend to read or view material to relax rather than to gather new information.

Once these scales were constructed, the evaluation of TV in gratifying each content seeking and process seeking motivation was measured by asking respondents to rate TV with relation to each item above (e.g., How would you rate television as a way to make you more knowledgeable?). The sum of the evaluation scores for four different content seeking items ( $\Sigma E_i$ ) indicates the overall evaluation of TV as a news/information medium. In the same vein, the sum of the evaluation scores for four different process seeking statements shows the evaluation of TV as an entertainment/ escape medium.

#### CGE-TV and RCGE-TV

Once content seeking and process seeking, and evaluation of TV were measured, CGE-TV and RCGE-TV can be computed by the equations presented in Chapter II. For example, CGE-TV of a respondent is computed by the following procedure: (a) the score for a content seeking statement is multiplied by the score of a corresponding TV evaluation statement ( $C_i \, x \, E_i$ ), and then (b) the four product scores are summed ( $\Sigma C_i \, x \, E_i$ ). Relative content gratification expectancy of TV is computed by dividing content gratification expectancy of TV ( $\Sigma C_i \, x \, E_i$ ) by total gratification expectancy of TV (TGE-TV).

#### Viewer Availability

Viewer availability was measured by asking respondents how many days a week they watch TV during traditional TV news hours. There are two major TV news hours in the evening -- 6-7 PM and 11-11:30 PM. The former is the primary news hour for both local news and network news. All three major network (ABC, CBS, NBC) affiliates broadcast news during this hour. From 11 to 11:30, all three major network affiliates broadcast local news. Therefore, the number of days a week a respondent watches TV during 6-7 PM was designated as viewer availability 1, and the number of days a week a respondent watches TV during 11-12 PM (to make the purpose of the measure less obvious, 11-11:30 PM was replaced by 11-12 PM) as viewer availability 2.

#### News Channel Awareness

News channel awareness was measured by asking respondents whether they can describe the major programs provided by C-SPAN and C-NBC. When a respondent described both channels correctly, 2 points were given. When only one channel was correctly recognized, 1 point, and when neither of them were correctly described, 0 point was assigned, respectively.

#### Channel Repertoire

Channel repertoire is defined as a set of channels turned on or watched intentionally. From this, the inclusion of news channels in the channel repertoire was tapped in by asking the following question.

People tend to turn to a set of cable channels intentionally, and other channels, unintentionally by channel hopping. Would you say you turn to CNN or other cable news channels intentionally or unintentionally?

#### Value Perception of News Channels

Value perception of news channels is defined as the monetary value a viewer put on news channels. To get at this value perception, the following question was asked.

If you had to, would you pay an additional fee to receive these news channels (CNN, CNN-Headline News, C-SPAN, and CNBC)?

When the answer was clearly affirmative, 2 points were given. when the answer was firmly negative, 0 points were

given. For those who said neither 'yes' nor 'no' clearly, 1 point was assigned.

#### Amount of TV News Viewing

The first major dependent variable is the amount of TV news viewing. In this study, two major news types were distinguished; broadcast news and 24-hour news. Broadcast news means both local and network news programs, which deliver daily news events covered by news reporters or fed by other news agencies with the traditional format of newscasting. In this study, tabloid-type news shows, celebrity interviews, news dramas, and news clips included as a part of other programs, etc. were excluded from broadcast news.<sup>1</sup>

Network news covers mostly national and international level news stories. Local news tends to focus on state (the state of Michigan) and regional level (Lansing and Jackson areas) news events. However, it also covers major national and international level news events from a local perspective.<sup>2</sup> In this study, the amount of local news

<sup>2</sup>For example, the national and international-level news events (e.g., the flood, G-7 Summit Meeting, and Gays in the

<sup>&#</sup>x27;The distinction between traditional news programs and these entertainment oriented news shows, however, has become somewhat unclear, as the former (especially, network news) has gradually taken the format of the latter for the last few years. The ideas such as "USA Todaying of news" (Broadcasting, Sep. 24, 1990, pp.34-39) or "network evening newscasts at times are indistinguishable from such syndicated tabloid fare as Hard Copy (Broadcast, Feb. 3, 1992)" reflect this trend.

viewing and network news viewing were measured by the number of days in a week a view watches local and network news programs. Then, the amount of broadcast news viewing was obtained by computing the mean of these two.

Twenty-four-hour news is defined as news programs delivered by specialized news channels such as CNN, CNN-Headline News, C-SPAN, and CNBC. In these channels it is very difficult to distinguish news programs and non-news programs. Therefore the amount of 24-hour news viewing was measured by the number of days a week a viewer turns to these channels.

#### Amount of Other News Media Uses

In this study, as other news media besides TV news, newspaper, radio news, and interpersonal communication were included. As was the case in the measurement of the amount of TV news viewing, the amount of these news media uses was measured by the number of days in a week a respondent is engaged in these media use activities, respectively.

#### Level of News Learning

In this study, the level of news learning (knowledge) is defined as the degree to which a respondent is aware of important news events in society. In specifying what

Military) which were used in this study to measure viewers' news knowledge level were covered by local news, even though the major focus of news coverage was somewhat limited on the state level and regional level aspects/implications of those events.

important news events in society mean, two conditions need to be carefully considered: (a) they should have a significant meaning for most social members rather than a specific segment of social members in order to ensure that the individual-specific interest differences do not affect the variability in news learning, and (b) these events should be covered extensively by all mass media, and the coverage for them should last for a while in order to ensure that the variability in news learning is directly related to normal news media exposure rather than other special activities or occasions (e.g., library search).

Four news events during these periods were evaluated as satisfying these two conditions. These stories include "The War in Bosnia," "G7 Summit Meeting in Tokyo" (international news events), "The Flood in the Midwest," and "Gays in the Military" (national news stories). These news events had general interest for most society members. All these news events were running news stories for more than one month by the time the survey began and were covered extensively by various news media including TV and newspapers. A brief description of each news event is presented in Appendix I.

For the actual measurement of the level of news learning (knowledge), the respondents were asked whether they were aware of each of these news events. When the answer was affirmative, then a probe question in a multiplechoice question form was given to check the accuracy of

their knowledge more closely. For example, the questions used for "The War in Bosnia" were as follows: Are you aware of the war in Bosnia (formerly Yugoslavia) ? 1 Yes 2 No (If yes) From what you heard, is the war a result of a conflict between students and the government; a conflict among countries in Eastern Europe; or a conflict among different ethnic groups?

1 the conflict between students and the government 2 the conflict among countries in Eastern Europe 3 the conflict among different ethnic groups 4 other 5 don't know

#### Research Design

The objective of this research is to investigate the changes in TV news viewing and news learning from it due to the development of multi-channel TV. For this it is necessary to compare the amount of TV news viewing and the news knowledge of broadcast-channel-only TV viewers with those of multi-channel TV viewers. To obtain data which enable this cross-sectional comparison of these two groups, a telephone survey was designed and administered.

#### Selection of Sample

Channel offerings and channel arrangements which are different among multi-channel TV systems can affect overall program choice and TV news viewing seriously. In order to control these factors, it is necessary to select the sample from the areas covered by one multi-channel TV system.
In this study, the sample was selected from City of Lansing and the adjacent areas<sup>3</sup> (total population 206,425) in mid-Michigan which are covered by Continental Cablevision. In these areas, multi-channel TV subscription rate (10/31/91) is 66.7 percent (59,376 subscribers/ 89,000 households); this is somewhat higher than the national average, 60.6 percent (Aug, 1993). Premium channel subscription rate (11/26/91) is 54.0 percent (32,089 premium channel subscribers/ 59,376 basic subscribers).

Broadcast-channel-only TV viewers in these areas (Lansing/Jackson market) receive five TV channels (ABC, CBS, NBC affiliates, a Fox affiliate, and a local PBS channel). In addition to these channels, multi-channel TV subscribers in these areas receive a variety of cable network channels including major 24-hour news channels such as CNN, CNN Headline News, C-SPAN, and C-NBC, off-the-air distant channels originating from other TV markets, and other access and information channels originating from the cable system. Table 3 shows the channels available for multi-channel TV subscribers and broadcast-channel-only viewers.

Table 3 about here.

<sup>&</sup>lt;sup>3</sup>These areas include Clinton County, Eaton County, Ingham County, Alaiedon Township, De Witt, De Witt Township, Delhi Township, Delta Township, Eaton Rapids, Grand Ledge, Lansing Township, Oneida Township, and Watertown Township.

Table 3 Channels Available for Broadcast-Channel-Only Viewers and Multi-Channel TV Subscribers in the Sampling Areas.

Broadcast TV		WLAJ (ABC), WLNS (CBS), WILX (NBC) WSYM (Fox), WKAR (PBS)		
	Distant Channels	WKBD (Fox), WTVS (PBS) Detroit; WJRT (ABC) Flint; WOOD (NBC) Grand Rapids; WWMT (CBS) Kalamazoo		
Multi- Channel TV Origi- nations		WTBS, WGN, A&E, BET, C-SPAN, CNBC,CNN, Discovery, ESPN, Family, CNN-Headline News, Home Shopping, Lifetime, MTV, TNN, Nickelodeon, Weather, TNT, USA, Univision		
		time-weather, bulletin board, public access, educational access, government access, religious access, library access, emergency alert, public service announcements, local sports.		

Source: <u>Television & Cable Factbook</u>, 1993.

After sampling areas were decided, a list of working phone exchanges (the first 3 numbers of a phone number, e.g., 355) for those areas were generated using information provided by the phone company and phone directories. The sample size of the project determines the number of working phone banks (first five digits of a phone number, e.g., 355-12) that need to be identified to randomly generate the sample. It is standard practice at the Institute for Social Research at the University of Michigan that six interviews be taken from working phone banks (Waksberg, 1978). Since the intended sample size of this study was 300, at least 50 working household phone banks needed to be interviewed.

Once the 50 banks were identified, using a formula of (a) a 75 percent hit rate (meaning that of all the phone numbers that have been identified, 75 percent will be working and the other 25 percent will be disconnected, businesses, non-working numbers, etc), (b) a 95 percent eligibility rate (meaning that 95 percent of the households contacted would be eligible; those ineligible would be non-English speaking households, no adults over 18, etc.), and (c) a 75 percent completion rate, a total of 561 numbers (about 11 numbers per bank) were randomly generated to achieve 300 completed interviews.<sup>4</sup> Phone numbers were

The actual computation of phone numbers is;  $300 / (.75) \times (.95) \times (.75) = 561$ 



replaced as necessary to ensure at least six completed interviews from each phone bank.

## Administration of the Survey

Telephone interviews were conducted by highly trained interviewers of the Institute for Public Policy and Social Research (IPPSR) at Michigan State University over a threeweek interval (August 13,1993 to August 28, 1993).<sup>5</sup> Before the main survey started, a pretest was administered and a few ambiguous questions were revised. The finalized version of the survey instrument is reproduced in Appendix II.

The interviewing occurred in a supervised, central location. Calling sessions were scheduled from 10 AM to 9:30 PM, seven days a week. Interviewers were instructed to let the telephone ring at least 10 times before coding the attempt as "no answer." All telephone numbers yielding results of "no answer" or "busy" were called back for the maximum number of 20 times. For randomi-zation, the one who had the most recent birthday at the home numbers answered was asked to respond to the survey.

<sup>&</sup>lt;sup>5</sup>Since a three week survey period is fairly long, the differences in interview dates can become a confounding factor affecting on the level of news learning. For example, the respondents who were interviewed last would have had more exposure to the running news stories than the earlier ones. Therefore, in order to examine the differences in the level of news learning due to the differences in interview dates, interview date was included as an independent variable in the analysis.

The actual survey yielded 303 completed interviews. The major production statistics of sample after the survey is presented in Table 4. The completion rate and refusal rate are important measures of data quality. Usually, if the completion rate is close to 65 to 70 percent, it is considered desirable. The completion rate of this study (79 percent) is substantially higher than this criterion value. Moreover, the refusal rate of 13 percent is substantially below the median refusal rate of 28 percent (Wiseman & McDonald, 1979). Therefore, the administrative attempts to control data quality were successfully achieved.

## Composition of the Sample

The composition of the sample is presented in Table 5. Of the total 303 cases, 208 cases (68.6 percent) were cable subscribers and 95 cases (31.4 percent), non-subscribers. This result is quite consistent with the 66.7 percent multichannel TV subscription rate in the sampling areas. The sample included a very wide range of age groups which spanned 18 to 92 (mean=44.40, median=40, mode=33). In terms of gender, females (184; 60.7 percent) were somewhat more sampled than males (119; 39.3 percent). The most common family size was 2 (mean 2.543, median=2, mode=2). The education level of the sample showed a wide range of variations from grade school only to graduate degrees (median, mode = some college).

Tab]	le 4					
The	Major	Production	Statistics	of	the	Sample

Interview dates	August 10, 1993 to August 28,1993					
Average interviews/day	16.8 interviews					
Average length/interview	12.71 minutes; SD 4.51, minimum 7 minutes, maximum 51 minutes					
Average number of call attempts	3.51 call attempts; SD 3.21; minimum 1, maximum 20 attempts					
Completion rate	<pre>79 percent: Completed interviews (303)/(completed interviews [303] + refusals [51] + non-interviews* [30])</pre>					
Refusal rate	13 percent (Refusals /[completed interviews + refusals + non-interviews])					

\* Non-interviews include the following: (a) potential respondents who are incapable of answering due to illness, physical limitations, language barriers, or respondents gone for the duration of the study; (b) respondents "left over" at the end of the calling period (cases that were contacted and determined to be eligible households, but an interview did not result as a result of reaching the desired number of interviews); (c) cases that reached the call limit (20) with at least one contact to determine that the number was a household.

Table 5. Sample Composition

Variable		Value	Frequency	Percent	Valid Percent	Cum Percent
SES						
		18-20	12	4.0	4.0	4.0
		21-30	64	21.1	21.3	25.2
		31-40	78	25.7	25.9 15.9	67.1
		51-60	35	11.6	11.6	78.7
		61-70	36	11.9	12.0	90.7
		71-92	28	9.2	9.3	100.0
			2	.7	Missing	
		Total	303	100.0	100.0	
Gender						
		MALE	119	39.3	39.3	39.3
		FEMALE	184	60.7	60.7	100.0
Number of	!					
Family He	abers	1	69	22.8	22.8	22.8
		2	109	36.0	36.1	58.9
		3	45	14.9	14.9	73.8
		4	24	5.6	6.6	98.3
		6	-5	1.7	1.7	100.0
		-	ĩ	.3	Missing	
Education	Level					
		ONIX	~	~	7	7
	HIGH SCHOOL	NOT CONDITI	2	5.9	6.0	6.6
	HIGH SCHOOL	GRADUATE	81	26.7	26.9	33.6
	VOCATIONAL/T	ECENICAL SCI	BOOL 8	2.6	2.7	36.2
	SONE COLLEGE		112	37.0	37.2	73.4
	COLLEGE GRAD	UATE (BA, BA	S) 49	16.2	16.3	89.7
	CRADUAT GRADUAT	'E WORK 1977 /Ma Mg 1	25 (CIND	2.0	A.3	100.0
	GRADUATE DEG		2	.7	Hissing	100.0
Race Sthr	nicity					
	BLACK OR AFR	ICAN AMERICA	NN 23	7.6	7.8	7.8
	WHITE OR CAU	CASIAN	251	82.8	84.8	92.6
	ASIAN OR PAC	IFIC ISLAND	ER 4	1.3	1.4	93.9
	NATIVE AMERI	CAN	5	1.7	1.7	95.6
	RISPARIC		7	2.3	Missing	100.0
Occupatio						
	UPPER WHITE	COLLAR	49	16.2	16.3	16.3
	HODER BUILD A		02 21	20.5	<b>∡</b> ∪.0 7.6	44.5
	LOWER BLUE C	OLLAR	39	12.9	13.0	57.5
	GOVERNMENTAL	EMPLOYEE	16	5.3	5.3	62.8
	FARMER		2	.7	.7	63.5
	BOUSEWIFE-BO	USEHUSBAND	36	5.6	6.6	/5.9
	UNENPLOYED		-4	1.3	1.3	83.4
	RETIRED		50	16.5	16.6	100.0
			2	.7	Missing	
Income						
	I.R.S.S. THAN 41	0.000	16	5.3	5.9	5.9
	\$10,000 - \$1	4,999	17	5.6	6.2	12.1
	\$15,000 - \$1	9,999	27	8.9	9.9	22.0
	\$20,000 - \$2	4,999	24	7.9	8.8	30.8
	\$25,000 - \$2	9,999	21	6.9	12.8	50.5
	\$35,000 - \$3	9,999	17	5.6	6.2	57.5
	\$40,000 - \$4	4,999	22	7.3	8.1	65.6
	\$45,000 - \$4	9,999	7	2.3	2.6	68.1
	\$50,000 - \$5	4,999	2	.7	.7	68.9 70 =
	\$55,000 - \$5 OVER \$60 00	99,999 M	29 56	9.6	20.5	100.0
		~	30	9.9	Hissing	20010
		Total	303	100.0	100.0	

Therefore, the actual survey obtained representative numbers of broadcast-channel-only TV viewers and multichannel TV viewers as cases, and a wide range of variations in demographic variables such as age and education levels. In this vein, too, the survey results were very successful.

## Analytical Techniques Used in Hypothesis Testing

Three inferential statistical procedures were used for the testing of the research hypotheses: Chi-square test, ttest, Pearson's product-moment correlation, and multiple regression analysis. The alpha level was set at .05 for all tests. Although the hypotheses were directional, they were tested by more conservative two-tailed statistical tests. SPSSPC+ (version 5.0) was used for the various statistical tests. The results will be provided in tables in the next chapter.

#### CHAPTER IV

## **RESEARCH RESULTS AND HYPOTHESES TESTING**

## Introduction

The purpose of this chapter is to present the results of the statistical analyses testing the hypotheses proposed in Chapter II. Major hypotheses testing in this research involves the cross-sectional comparison of TV news viewing and news learning from it between broadcast-channel-only TV viewers and multi-channel TV viewers. Therefore, in composing this chapter, the statistical analysis results of amount of TV news viewing and news learning from it in each TV viewing situation will first be presented. Then the results of the hypothesis test will be addressed.

## Amount of TV News Viewing

The first objective of this study is to identify the various theoretical factors of TV news viewing and to investigate their relationships with the amount of TV news viewing in both broadcast-channel-only and multi-channel situations. The theoretical predictors explicated in this study include SES, TV news viewing intention (CGE-TV and RCGE-TV), viewer availability, news programming(channel) awareness, channel repertoire, and value perception of news

channels. Among these variables, SES, TV news viewing intention, viewer availability are relevant to TV news viewing in both broadcast-channel-only and multi-channel situations. The other variables such as news channel awareness, channel repertoire, value perception of news channels are only relevant to a multi-channel situation.

Besides these variables, TV news viewing is necessarily contingent upon other factors, such as the overall amount of TV viewing, the amount of other media exposure (the amount of newspaper reading, the amount of radio listening, and the amount of interpersonal communication) and other demographic factors (age, gender, number of children, and household income). These variables were also included in the analysis.

## Average Amount of TV Viewing and TV News Viewing

The average amount of TV viewing for the whole sample (298 cases, 5 cases missing) is close to 3 hours, <u>mean</u> = 2.92, <u>SD</u> = 1.88, <u>median</u> = 2 hours, <u>mode</u> = 2 hours. The average amount of TV viewing in a broadcast-channel-only situation (94 cases) is a little less than two and half hours, <u>mean</u> = 2.36, <u>SD</u> = 1.71, while the average amount of TV viewing in a multi-channel situation (204 cases) is a little more than 3 hours, <u>mean</u> = 3.17, <u>SD</u> = 1.91. Therefore, these two groups reveal substantial differences in the amount of TV viewing (.81 hour; about fifty minutes),

<u>t</u> = 3.52, <u>DF</u> = 296, <u>p</u> < .001. This result coincides with the findings from past TV audience studies (Becker, Dunwoody, & Rafaeli, 1983; Gelman, 1983; Grotta & Newsom, 1983; Henke et. al., 1984; Reagan, 1984; Webster, 1984) that multi-channel subscribers tend to watch more TV than broadcast-channel-only TV viewers. Table 6 summarizes these findings regarding the average amount of TV viewing.

Table 6 about here

With regard to the amount of TV news viewing, broadcast-channel-only TV viewers watch broadcast news about four days a week, mean = 3.99, SD = 2.42, while multichannel TV viewers watch broadcast news a little more than four days a week, mean = 4.30, <u>SD</u> = 2.22. The results demonstrate that no significant differences exist between these two groups,  $\underline{t} = 1.09$ ,  $\underline{DF} = 300$ ,  $\underline{p} = .274$ . Multichannel TV viewers also turn to 24-hour news about three to four days a week, mean = 3.61, SD = 2.50, and about one hour in daily average, mean = 1.04 hour, <u>SD</u> = .96. Therefore, multi-channel subscribers watch as much broadcast news as the broadcast-channel-only viewers and also watch 24-hour news. Thus, on average, we can conclude that multi-channel TV viewers watch TV news more than broadcast-channel-only TV viewers. Table 7 summarizes these findings.

Table 7 about here

Table 6. Average Amount of TV Viewing a Day

	Number of cases	Mean	SD	t- value	DF	2tail Sign.
Broadcast TV Viewers	94	2.36	1.71	2 5 2	206	001
Multichannel TV Viewers	204	3.17	1.91	3.52	290	
Total	298	2.92	1.88			

Table 7. Average Number of Days of TV News Viewing

	Number of cases	Mean	SD	T- value	DF	2-tail Sign.
Broadcast News*	95	3.99	2.42	1 00	300	.274
Broadcast News**	207	4.30	2.22	1.09		
24-Hour News	201	3.61	2.50			

\* broadcast-channel-only situation
\*\* multi-channel situation

TV News Viewing in a Broadcast-Channel-Only Situation

In a broadcast-channel-only situation, the major theoretical factors such as the amount of viewing, SES, TV news viewing intention (CGE-TV), and viewer availability were proposed. In addition, other related factors such as RCGE-TV, the amount of TV viewing, the amount of other media exposure, and other demographic factors (age, gender, the number of family members, and household income) were included in the analysis.

<u>Correlation matrix</u>. In order to determine (a) how the amount of TV news viewing is related to the independent variables and (b) how independent variables are related to one another (which has a crucial meaning with regard to the following multiple regression analysis), all possible sets of correlations among all the variables were performed. Table 8 shows the resulting correlation matrix.

Table 8 about here

According to this correlation matrix table, the amount of broadcast news viewing is significantly correlated with the two major theoretical factors, CGE-TV, <u>r</u>=.3217, <u>p</u> <.01, and viewer availability 1, <u>r</u> = .6844, <u>p</u> < .001. It is also substantially correlated with the amount of TV viewing, <u>r</u> = .4793, <u>p</u> < .001 and age, <u>r</u> = .4719, <u>p</u> < .001.

Examination of the correlation matrix shows a complex pattern of relationships among independent variables (CGE-TV

Correlation Ma	Table 8.
strix of	
Variables	
Related	
to the	
Amount (	
of TV News	
Viewing	
in a Bro	
oadcast-Chan	
nel-Only S	
Situation	

SES CGE-TV RCGE-TV Availability Availability TV viewing TV viewing Newspaper Radio news Interpersona Age Gender Family size Income	
1397 .3217** .0237 1 .6844*** 2 .1824 .1036 0068 1 .1153 .4719*** .1726 2202 .0534	TV news viewing
.0890 1199 1199 2207 2207 1228 1228 1143 1143 1269 1269 1269	SES
.3088* .2869* .1688 .2390* .0274 .1628 .1580 .2233 1117 0334	CGE-TV
.1747 1665 0397 .0887 .1613 .1742 0424 .0735 .1075	RCGE-TV
0730 .3944** .0094 .0566 .4563** 1247 .1162	Availl
* .1105 -,0491 1182 1847 *1847 0543 .0311 1214	Avail2
0362 .0654 .1417 .1145 11893 1150	¶⊽ Viewing
.1853 .4158** 0385 0771 .2913*	Hews-
* .5320** 0157 .0014 .0007 .2841*	Radio n <del>ew</del> s
• • • 0059 • 0319	Inter- personal
• .2202	Age
.1127 1837	Gender
-1004	Family Bize

N of cases: 73 2-tailed Significance \* p< .05, \*\* p< .01, \*\*\* p< .001

and RCGE-TV, CGE-TV and viewer availability 1, CGE-TV and amount of TV viewing, viewer availability and the amount of TV viewing, viewer availability and age, newspaper reading and interpersonal communication, newspaper reading and age, newspaper reading and household income, radio news listening and interpersonal communication, radio news listening and household income, and interpersonal communication and household income). These results show that independent variables in this study are not independent but are closely inter-related to one another (the implications of these correlations among independent variables will be discussed in Chapter V).

Multiple regression analysis. In order to determine the relationship between all the independent variables together and the amount of broadcast news viewing in a broadcast-channel-only situation, a multiple regression analysis was carried out. The examination of the scatterplot and residual plot of each independent variable by dependent variables did not show any strong evidence of non-linearity, heteroscadacity and the existence of significant outliers. Table 9 shows the results of the analysis.

Table 9 about here

The multiple correlation coefficient (R) is .82 which is interpreted as the correlation between the entire

Table 9. Multiple Regression Analysis Results of the Amount of Broadcast News Viewing in a Broadcast-Channel-Only Situation

Variable	В	Beta	F	Sig F
AGE	.035813	.226268	5.921	.0180
GENDER	1.022736	<b>.</b> 212895	6.912	.0109
EDUCATION	087226	055542	.474	.4940
NO. OF FAMILY	307541	129803	2.574	.1140
AVAILABILITY 1	.542642	.534348	32.337	.0000
AVAILABILITY 2	.257216	.246668	9.330	.0034
AMOUNT OF TV	.147887	.103404	1.197	.2783
CGE-TV	.011201	.090251	1.000	.3214
RCGE-TV	-1.339151	073926	.739	.3935
INTERPERSONAL	.094178	.096019	.857	.3584
RADIO NEWS	036081	043721	.236	.6287
NEWSPAPER	014207	015787	.033	.8561
INCOME	.003353	.005212	.003	.9535
(Constant)	-1.234921		.624	.4327
Multiple R	.82306			
R Square	.67743			

independent variables together and the dependent variable. The R square  $(R^2)$  is .68, which means 68 percent of the whole variance in the amount of broadcast news viewing is explained by the independent variables included in the multiple regression equation.

In the multiple regression analysis, it is a common practice to interpret the Beta coefficients as showing the relative importance of independent variables (the true relationships between independent variables and a dependent variable). However, what a Beta coefficient means is the unique contribution of an independent variable to the variability of a dependent variable, or in other words, the correlation between an independent variable and a dependent variable after the influences of all the other independent variables are partialed out.

When independent variables are strongly correlated with one another as is the case in this study (multicollinearity), neither the correlation coefficients nor Beta coefficients reflect in any absolute sense the true relationships between independent variables and dependent variables.<sup>1</sup> Until the causal relationships among all the

education level .7 .6 amount of TV news income .4

<sup>&</sup>lt;sup>1</sup>It is misleading to interpret that a Beta coefficient (multiple partial correlation coefficient) shows the true relationship between two variables. The following example illustrates this.

independent variables included in this study are revealed theoretically, no statistical techniques known so far provide a satisfactory solution. Therefore, in this study, rather than depending solely on one of these two, both correlation coefficients, as the indicators of the observed relationships and Beta coefficients, as the indicators of the unique relationships after the influences of all the other variables are controlled, will be used in complementary fashion for model constructions and hypothesis testing.

The following model of news viewing in a broadcastchannel-only situation (Figure 5) is based on the combined

In this case, the true relationship between income and amount of TV news viewing is 0. Therefore, the Beta above reflects the true relationship between income and amount of TV news viewing much better than the correlation coefficient (.4). The true relationship between education level and amount of TV news viewing, however, is .7 instead of .46. Therefore, the Beta coefficient of education level is far off from reflecting the true relationship, while the correlation coefficient reflects the true relationship. Thus, until we can decide the relationships among independent variables (theoretically), neither correlation coefficients nor Beta coefficients tell us the true relationships between multiple independent variables and a dependent variable. For a more detailed discussion about this issue, see the variance partitioning chapter of Pedhazur (1982, pp. 174-220).

In this case the Beta coefficient of education level will be .46  $(.7 - .6 \times .4)$  and the Beta coefficient of income will be -.02  $(.4 - .6 \times .7)$ . The problems of these Beta coefficients become obvious if the true relationships among these variables are assumed as follows:

use of these two coefficients. The numbers outside parentheses are zero-order Pearson's correlation coefficients. The numbers in parentheses are Beta coefficients. When either one of these coefficients was significant, the variable was included in the model.

Figure 5 about here

## Broadcast News Viewing in a Multi-Channel Situation

In a multi-channel situation, besides the major theoretical factors of the amount of broadcast news viewing in a broadcast-channel-only situation, news channel awareness, channel repertoire, and value perception of news channels are included.

Correlation matrix. Table 10 shows the correlation matrix among all the variables related to broadcast news viewing in a multi-channel situation. Broadcast news viewing is significantly correlated with amount of 24-hour news viewing ( $\mathbf{r} = .3345$ ,  $\mathbf{p} < .001$ ), education level ( $\mathbf{r} = -$ .2883,  $\mathbf{p} < .001$ ), CGE-TV ( $\mathbf{r} = .3691$ ,  $\mathbf{p} < .001$ ), RCGE-TV ( $\mathbf{r}$ = .2592  $\mathbf{p} < .01$ ), viewer availability 1 ( $\mathbf{r} = .4962$   $\mathbf{p} <$ .001), amount of TV viewing ( $\mathbf{r} = .2457$   $\mathbf{p} < .01$ ), amount of newspaper reading ( $\mathbf{r} = .1859$   $\mathbf{p} < .05$ ), and age ( $\mathbf{r} = .4407$  $\mathbf{p} < .05$ ). Also, many independent variables are significantly correlated one another as was the case in the amount of broadcast news viewing in a broadcast-channel-only situation. For example, education level and 24 hour news



\* p < .05 \*\* P < .01 \*\*\* P < .001

Figure 5. TV News Viewing in a Broadcast-Channel-Only Situation



Age Gender Family size Income		Age Gender Family size Income	Value percepti TV viewing Newspaper Radio news Interpersonal Premium channe	24-hour news SES CGE-TV RCGE-TV RVailability 1 Availability 2 Awareness Repertoire	Table 10 Correlation Ma
2441** 0734 .0747 .0760	Premium	.1033 0093 1588	cm .0387 .2457** .1859* 0525 .1676 .1676 10094	2883*** .3691*** .2592** .4962*** .1642 .1277	trix of Var Broadcast news
.1405 2558** 1171	Age	1033 1041 0189	.4127*** 0063 .1263 .0040 .1299 .0609	1048 .1758* .2591** .1659 .0411 .0411 .3396***	iables Ra 24-hour news
0513 1358	Gender	2656** 1178 .3271***	0341 0544 0572 0717 0903	0692 .0629 .0068 .0068 .0004	alated to SES
.2743**	Family size	.1493 0189 .0393 0142	.1590 .1493 .1393 .0375 .0873 .0175	.4802** .2194* .0934 	the Amou CGE-TV
		1453 .0710 .2064*	.0210 0517 .2026* .1035 1179	1617 1027 2898***	nt of TV   RCGE-TV
		.3383*** 0175 1850* 1864*	0064 .3844*** .1555 .0498 .0557 0181	1082 .0355	Sews View; Availl
		0783 0783 0115+ 0049	.1700 1618 0888 0690 .2144*	1191	ing in a l Avail2
		1229 1672 0248 .1227	.1351 .0459 .0135 .0943	0062	Multi-Cha Aware
		.2563* .0240 .0922 .2135*	.2367* 0910 .0992 .0958 .0803 0752		nmel situ Reper- toire
		0555 1359 0429 0079	0116 .0346 1344 .0517 .0186		ation Value
		.1225 .0522 1439	.0709 1380 0301 .0276		TV viewing
		.3355**1 0088 .0651	.2692** .4332***		Jeård - snefi
		• .0692 .0261 .0641 .0551	• <b>.4</b> 267••• - <b>.0</b> 760		Radio news
		.1215 .2571** .1138 .0514	0457		Inter- personal

No of cases: 131 2-tailed Significance \* p< .05, \*\* p< .01, \*\*\* p< .001

.1405 -.2558\*\* -.0513 -.1171 -.1358

channel awareness, CGE-TV and RCGE-TV, amount of newspaper reading and amount of interpersonal communication, amount of radio news listening and amount of interpersonal communication all show correlations higher than .40.

Multiple regression analysis. As was the case in a broadcast-channel-only situation, the examination of the scatterplot and residual plot of each independent variable by dependent variables did not show any strong evidence of non-linearity, heteroscadacity and the existence of significant outliers. Table 11 shows the results of the multiple regression analysis. The relationship between the independent variables together and the dependent variable (R) is .75. The variance of broadcast news viewing explained by the independent variables (R2) is .56.

From the previous correlation and multiple regression analyses, the model of broadcast news viewing in a multichannel situation can be presented as Figure 6.

Table 11 and Figure 6 about here

## 24-Hour News Viewing In a Multi-Channel Situation

To analyze the amount of 24-hour news viewing, the same set of independent variables contained in the analysis of the amount of broadcast news viewing in a multi-channel situation is included, except that the dependent variable here is 24-hour news viewing.

Table 11. Multiple Regression Analysis Results of the Amount of Broadcast News Viewing in a Multi-Channel Situation

Variable	В	Beta	F	Sig F
AGE	.040978	.309748	13.231	.0004
GENDER	020562	004696	.004	.9478
EDUCATION	272237	201873	6.523	.0120
INCOME	016925	028722	.153	.6961
NO.OF PEOPLE	.197485	.085321	1.457	.2298
AVAILABILITY1	.348899	.383919	25.241	.0000
AVAILABILITY2	.255706	.295639	16.592	.0001
RCGE-TV	2.273609	.117639	2.010	.1590
24-HOUR NEWS	.128228	.132460	2.830	.0952
CGE-TV	.017367	.124735	2.687	.1039
RADIO NEWS	108381	142025	3.830	.0528
INTERPERSONAL	.101524	.119878	2.232	.1379
VALUE	480538	104781	1.956	.1646
TV VIEWING	064745	057112	.609	.4368
AWARENESS	.113549	.030136	.168	.6823
PREMIUM	096888	021334	.095	.7579
REPERTOIRE	038753	007889	.011	.9159
NEWSPAPER	.005328	.006479	.007	.9312
(Constant)	506720		.117	.7331
Multiple R	.74988			
R Square	.56232			



Figure 6. Broadcast News Viewing in a Multi-Channel Situation

The correlation matrix among variables in a multichannel situation was presented previously (Table 10). Here, for the convenience of readers, just the correlation between the amount of 24-hour news viewing and other variables will be presented in Table 12.

Table 12 about here

Regression Analysis. After examining the scatterplots and residual plots, regression analysis between independent variables and the amount of 24-hour news viewing was carried out. The result is presented in Table 13. Based on these analyses, a 24-hour news viewing model is illustrated as Figure 7.

#### Hypotheses Testing

Based on the results presented so far regarding (a) broadcast news viewing in a broadcast-channel-only situation, (b) broadcast news viewing in a multi-channel situation, and (c) 24-hour news viewing in a multi-channel situation, we can test the hypotheses (H1 to H8) related to the amount of TV news viewing.

H1: SES will be positively related to the amount of TV news viewing in a multi-channel situation, while it will not be related to the amount of TV news viewing significantly in a broadcast-channel-only situation.

This hypothesis predicted that (a) a significant positive relationship between SES and the amount TV news Table 12. The Correlations between Independent Variables and the Amount of 24-Hour News Viewing

Correlation	Variable	Correlation
.3345***	Newspaper	0063
1048	Radio News	.1263
.1758*	Interpersonal	.0040
.2591**	Premium Channel	.1299
.1659	Age	.0609
.0411	Gender	.2122*
.0946	No. of People	1033
.3396***	Income	.1041
.4127***	TV Viewing	0189
	Correlation .3345*** 1048 .1758* .2591** .1659 .0411 .0946 .3396*** .4127***	Correlation Variable .3345*** Newspaper 1048 Radio News .1758* Interpersonal .2591** Premium Channel .1659 Age .0411 Gender .0946 No. of People .3396*** Income .4127*** TV Viewing

N of cases: 131 \* p< .05 \*\* p< .01 \*\*\* p< .001

Table 13.

Multiple Regression Analysis Results of the Amount of 24-Hour News Viewing in a Multi-Channel Situation

Variable	В	Beta	F	Sig F
AGE	.023892	.174828	2.830	.0953
GENDER	356979	078916	.896	.3457
SES	139894	100422	1.127	.2907
INCOME	057746	094866	1.233	.2691
NO. OF PEOPLE	.311975	.130479	2.513	.1157
VALUE PERCEPTION	1.648823	.348038	17.917	.0000
RCGE-TV	4.399280	.220352	5.297	.0232
BROADCAST NEWS	.187290	.181307	2.830	.0952
REPERTOIRE	.912452	.179807	4.414	.0378
AWARENESS	.518728	.133272	2.454	.1200
PREMIUM CHANNEL	.554342	.118163	2.179	.1426
CGE-TV	016385	113924	1.623	.2053
TV VIEWING AMOUNT	083878	071626	.700	.4044
AVAILABILITY 1	.035647	.037972	.148	.7011
AVAILABILITY 2	.020362	.022790	.063	.8023
INTERPERSONAL	.017655	.020181	.045	.8317
NEWSPAPER	014240	016764	.037	.8486
RADIO NEWS	.002894	.003671	.002	.9661
(Constant)	-2.815284		2.522	.1150
Multiple R	.63318			
R Square	.40091			



Figure 7. 24-Hour News Viewing in a Multi-Channel Situation

viewing will be found in a multi-channel situation, while (b) no such relationship will be found in a broadcastchannel-only situation, based on "interest maximization theory." The relationships between SES and the amount TV news viewing in three different situations are presented in Table 14.

The Relationships between SES and the Amount of TV News Viewing

	Broadcast News Broadcast-Only	Broadcast News Multi-Channel	24-Hour News Multi-Channel
Correlation	1397	2883***	1048
Beta	0555	2019*	1004

\* p < .05, \*\*\* p < .001

Throughout three different situations, both correlation and Beta coefficients are negative. Contrary to the prediction in H1, SES shows a significant negative correlation with the amount of broadcast news viewing in a multi-channel situation. Therefore, H1 is not supported. The actual results (the overall negative relationships between SES and the amount of TV news viewing and the stronger negative relationship in broadcasting news viewing in a multi-channel situation) strongly suggest that exactly the opposite direction of changes proposed in H1 might be the case; that is, SES tends to have a negative relationship with the amount of TV news viewing, and this relationship becomes stronger (in a negative direction) when interest

Table 14

maximization is possible due to multi-channel development (this will be discussed in detail in Chapter V.)

H2: In a broadcast-channel-only situation, CGE-TV will be positively related to the amount of TV news viewing.

H3: In a multi-channel TV situation, RCGE-TV will be positively related to the amount of TV news (particularly, 24-hour news).

These two hypotheses predicted that CGE-TV as the indicator of TV news viewing intention in a broadcastchannel-only situation (when program choice is limited and TV viewing in news hours mean almost compulsory TV news viewing) would be positively related to the amount of TV news viewing in a broadcast-channel-only situation, while RCGE-TV as the indicator of TV news viewing intention in a multi-channel-situation (when program choice is unlimited and TV viewing in traditional news hours does not necessarily mean compulsory TV news viewing) would be positively related to the amount of TV news viewing (particularly with the amount of 24-hour news viewing). Table 15 shows the relationships of these two variables with TV news viewing in three different situations.

Table 15 shows that in a broadcast-channel-only situation, CGE-TV has a significant positive correlation with the amount of broadcast news viewing, while RCGE-TV has little relationship with it. However, in a multi-channel situation, both CGE-TV and RCGE-TV have positive relationships with broadcast news viewing. Table 15 The Relationships between CGE-TV and RCGE-TV and the Amount of TV News Viewing

	Broadcast News		Broadcast News		24-Hour News	
	Broadcast-Only		Multi-Channel		Multi-Channel	
	CGE-TV	RCGE-TV	CGE-TV	RCGE-TV	CGE-TV	RCGE-TV
Corr.	.3217**	.0237	.3691***	•2592**	.1758*	.2591**
Beta	.0903	.0739	.1247	•1176	0716	.2204*

\* p < .05, \*\* p < .01, \*\*\* p < .001

Furthermore, with regard to 24-hour news viewing in a multi-channel situation, RCGE-TV shows a stronger correlation than CGE-TV. These results support H2 and H3.

H4: News availability will be positively related to the amount of broadcast news viewing in both broadcastchannel-only and multi-channel situation, while it is not related with the amount of 24-hour news viewing.

This hypothesis predicted that when TV news is available during limited hours (e.g., traditional news hours) as is the case in broadcast news viewer availability (whether a person can watch TV during news hours) will have a strong relationship with the amount of TV news viewing. Similarly, if TV news is available anytime, viewer availability will have little relationship with the amount of TV news viewing as is the case in 24-hour news. Table 16 shows the relationship between viewer availability and the amount of TV news viewing in three different situations.

Tab	le	16.						
The	re	lationship	between	Viewer	Availability	and	Amount	of
TV	new	s Viewing.			_			

	Broadcast News		Broadcast News		24-Hour News	
	Broadcast-Only		Multi-Channel		Multi-Channel	
	Avail 1	Avail2	Avail 1	Avail 2	Avail 1	Avail 2
Corr.	.6844***	.1824	•4962***	.1642	.1659	.0411
Beta	.5343***	.2467**	•3839***	.2956***	0168	.0202

**\*\*** p <.01, **\*\*\*** p < .001

Table 16 shows that in regard to broadcast news viewing, both availability 1 (number of days in a week a viewer watches TV during 6-7 PM) and availability 2 (number of days in a week a viewer watches TV during 11-12 PM) show either significant correlation or Beta coefficients. Especially, viewer availability 1 (viewer availability in the primary news hour) is very strongly related to the amount of broadcast news viewing. However, with regard to 24-hour news, neither availability 1 nor availability 2 show significant correlation or Beta coefficients. These results confirm H4.

# H5: News programming awareness will be positively related to the amount of 24-hour news viewing.

This hypothesis proposed that in a multi-channel situation, where there are so many different channels available, 24-hour news programming will be watched more when the offerings of these channels are well recognized by viewers and vise-versa. The correlation and Beta coefficients between programming awareness and 24-hour news viewing are .0946 and .1333, respectively. Even though the directions of these coefficients show that there are positive relationships between these two variables, neither of these two coefficients are significant in p < .05 level. Therefore, the results do not support H5.

H6: The inclusion of 24-hour news channels in channel repertoire will be positively related to the amount of 24-hour news viewing.

This hypothesis proposed that in a multi-channel situation, since viewers tend to turn to only a limited set of channels intentionally (channel repertoire), whether 24hour news channels belong to these intentionally watched channels will affect the amount of 24-hour news viewing. The correlation coefficient and Beta coefficient between channel repertoire and the amount of 24-hour news viewing are  $\underline{r} = .3396$ , p < .001, and <u>Beta</u> = .1798, p < .05, respectively. Therefore, the results support H6.

H7: The value perception of news/information channels (the willingness to pay extra money for these channels) will be positively related to the amount of 24-hour news viewing.

This hypothesis proposed that in a multi-channel situation where viewers pay money (subscription fee) to achieve a various set of extra values, those who perceive the value of receiving additional news channels through multi-channel subscription highly (those who willing to pay extra money for these channels) will watch them more than those who do not (those who put their values somewhere else). The correlation coefficient and Beta coefficient between value perception of 24-hour news channels and the amount of 24-hour news viewing are  $\underline{r} = .4127$ , p <.001, and <u>Beta</u> = .3480, p <.05, respectively. Therefore, the results support H7.

## TV News Viewing and News Learning

The second objective of this study is to investigate how news learning from TV news viewing differs in broadcastchannel-only and multi-channel situations. Besides TV news viewing, SES and news learning motivation were included as other major theoretical factors of news learning. In addition to these variables, news learning (knowledge) is necessarily contingent upon other factors, such as the amount of other media exposure (newspaper reading, radio news listening, interpersonal communication) and other demographic factors (age, gender, and household income), and the date of telephone interview. These variables were also included in the analysis.

## News Learning Level of Four News Events

Among the four news events (the Flooding, War in Bosnia, G-7 Summit Meeting, and Gays in Military), the event Flooding showed the highest awareness (91 percent), while the G-7 Summit Meeting marked the lowest awareness (49 percent). In average, the overal awareness of the four news events (291 cases) was 71.2 percent (or three out of four events)

Table 17 News Learning Level of 4 News Events

	cases	awareness (%)
Flooding War in Bosnia G-7 Summit Gays in Military	302 295 300 300	91.1 67.5 49.3 75.0
Total	291	71.2

## News Learning in a Broadcast-Channel-Only Situation

In order to determine how the level of news learning is related to the independent variables and how independent variables are related one another, all possible sets of correlations among all the variables were performed. Table 18 shows the resulting correlation matrix.

Table 18 about here

According to this correlation matrix, level of news knowledge is significantly correlated with the three major theoretical factors, the amount of broadcast news viewing, <u>r</u> = .3268, <u>p</u> < .01, SES, <u>r</u> = .3243, <u>p</u> < .01, and news learning motivation <u>r</u> = .3611, <u>p</u> < .01. The other variables
Table 18. Correlation Matrix of Variables Related to the Level of News Learning in a Broadcast-Channel-Only Situation

TV News SES Motivation Newspaper Radio news Interpersona Age Gender Income Date	
1563 0476	Learning
0969 .1110 .1177 .0491 .0282 .3898*** .0877 .0726 .1435	TV neus
.2312 .0237 0285 0182 1880 .1422 .0127	SES
Vation .0938 .1791 .2908* .1377 0237 .1490 0999	Moti-
paper .2527* .4837*** .2103 0774 .3091**	News -
news .6213*** .0435 .0156 .3608**	Radio
0495 .0752 .4833**	Inter-
0309 1455	Ace
2130 0390	Gender
0778	Income

107

N of cases:

72

2-tailed Significance \* p< .05, \*\* P< .01, \*\*\* P< .001

do not show significant correlations with the level of news learning. The correlation matrix also shows a complex pattern of relationships among independent variables (age and the amount of TV news viewing, news learning motivation and interpersonal communication, newspaper reading and radio listening, newspaper reading and interpersonal communication, newspaper reading and household income, and interpersonal communication and household income).

In order to determine the relationship between all the independent variables together and the level of news learning, a multiple regression analysis was carried out. The examination of the scatterplot and residual plot of each independent variable by the level of news learning did not show any strong evidence of non-linearity, heteroscadacity and the existence of significant outliers. Table 19 shows the results of the multiple regression analysis.

# Table 19 about here

The multiple correlation coefficient (R) is .58, which is the correlation between the nine independent variables together and the level of news learning. The R square ( $R^2$ ) is .34, which means 34 percent of the whole variance in the level of news knowledge is explained by the independent variables included in the multiple regression equation. Table 19.

Multiple Regression Analysis Results of the Level of News Learning in a Broadcast-Channel-Only Situation

Variable	В	Beta	F	Sig F
MOTIVATION	2.589534	.248231	4.588	.0362
BROADCAST NEWS	3.587931	.329021	7.792	.0070
SES	4.390486	.278585	6.224	.0153
GENDER	-6.376352	120936	1.173	.2831
RADIO NEWS	1.402719	.159234	1.404	.2407
INTERPERSONAL	-1.162460	111566	.421	.5188
INTERVIEW DATE	002984	075866	.477	.4923
NEWSPAPER	577640	061058	.233	.6314
AGE	.089208	.049180	.153	.6971
INCOME	.204290	.029155	.049	.8250
(Constant)	248.106187		.481	.4904
Multiple R	.58438	<u>,</u>		
R Square	.34150			

As was discussed before, neither correlation coefficients nor Beta coefficients are sufficiently valid indicators of the relative strength of relationships between independent variables and the dependent variable when independent variables are substantially correlated. Therefore, here again, both correlation and Beta coefficients will be used as the indicators of the relationships together.

Figure 8 shows the model of news learning in a broadcast-channel-only situation. The numbers outside parentheses are zero-order Pearson's correlation coefficients. The numbers in parentheses are Beta coefficients. When either one of these coefficients was significant, the variable was included in the model.

Figure 8 about here

# News Learning in a Multi-Channel Situation

In order to determine how the level of news knowledge is related to the independent variables and how independent variables are related to one another in a multi-channel situation, all possible sets of correlations among all the variables were performed. Table 20 shows the resulting correlation matrix.

Table 20 about here



\*\*\* P< .001

<u>Figure 8.</u> News Learning in a Broadcast-Channel-Only Situation

Table 20. Correlation Matrix of Variables Related to the Level of News Knowledge in a Multi-Channel Situation

Interview da	Income	Gender	Age	Interpersons	Radio news	Newspaper	Motivation	SES	24-hour news	Broadcast ne		
lte1517	.2927***	1991*	.2275**	.2171**	.1594*	<b>.</b> 1698*	.2661***	.4210***	.2254**	ws0115		Learning
.0403	1160	.0462	.4333***	.1496	0521	.2155**	.1326	2711***	.2747***		news	Broadcast
0479	0274	1127	2150**	.1180	0232	.1429	.1588*	.0065			nevs	24-hour
.0241	.3729***	1585+	2182**	.0069	<b>.</b> 1594*	.0409	.2775***					SES
.0289	.1928*	.0071	6800	.2835***	.2346**	.2492**					vation	Noti-
.0045	.1252	.0566	.2924***	-4388***	.2771***						paper	News-
.0719	.0947	0326	.0665	-4140***							news	Radio
.0737	.0742	.2131**	.1608*								personal	Inter-
.0160	0924	.1925*										Åg <b>e</b>
.0492	1219											Gender
0815												Income

112

According to this correlation matrix, level of news learning is significantly correlated with the amount of 24hour news viewing  $\underline{r} = .2254$ ,  $\underline{p} < .01$ , SES,  $\underline{r} = .4210$ ,  $\underline{p}$ <.001, and news learning motivation,  $\underline{r} = .2661$ ,  $\underline{p} < .001$ . The level of news learning is also significantly correlated with other media uses (newspaper reading, radio news listening, and interpersonal communication), age, gender, and household income. The correlation matrix also shows a complex pattern of relationships among independent variables. For example, age and broadcast news viewing, education level and household income, newspaper reading and interpersonal communication, and radio news listening and interpersonal communication show strong correlations.

Table 21 shows the results of the multiple regression analysis. The multiple correlation coefficient (R) is .65, which means the correlation between the ten independent variables together and the level of news learning. The R square ( $R^2$ ) is .43, which means 43 percent of the whole variance in the level of news learning is explained by the independent variables included in the multiple regression equation.

Table 21 about here

Based on these analyses, Figure 9 illustrates the relationship between independent variables and the level of news knowledge in a multi-channel situation. Table 21 Multiple Regression Analysis Results of the Level of News Learning in a Multi-Channel Situation

Variable	В	Beta	F	Sig F
SES	5.924624	.378489	27.590	.0000
AGE	.554726	.370029	26.097	.0000
GENDER	-11.124067	216670	10.766	.0013
INTERPERSONAL	2.124564	.218225	8.202	.0048
INTERVIEW DATE	005603	153796	6.192	.0139
INCOME	.776382	.112857	2.818	.0952
24-HOUR NEWS	1.112816	.109768	2.760	.0987
BROADCAST NEWS	-1.185273	104665	2.046	.1546
MOTIVATION	.999890	.099070	2.050	.1542
NEWSPAPER	550534	059655	.683	.4099
RADIO NEWS	285712	032184	.210	.6478
(Constant)	472.689562		6.555	.0114
Multiple R	.65380			
R Square	.42745			



\* P< .05 \*\* P< .01 \*\*\* P< .001

Figure 9. News Learning in a Multi-Channel Situation

#### Hypotheses Testing

Based on the results presented so far regarding (a) news learning in a broadcast-channel-only situation, (b) and news learning in a multi-channel situation, we can test the hypotheses (H8 to H14) related to news learning and the role of TV.

H8: SES will be positively related to news learning.

This hypothesis predicted that a significant positive relationship between SES and news knowledge exists both in a broadcast-channel-only and multi-channel situations since cognitive skill and prior knowledge tend to facilitate the news learning of high SES people. The relationships between SES and the level of news learning in two different situations are presented in Table 22.

## Table 22. The Relationships between SES and the Level of News Learning

	Broadcast-Only	Multi-Channel
Correlation	.3243**	.4210***
Beta	.2787*	.3785***

\* p<. 05 \*\* p< .01 \*\*\* p < .001

Table 22 shows that in broadcast-channel-only and multi-channel situations, both correlation and Beta coefficients are significant which is strong evidence of the substantial relationship between SES and the level of news learning. Therefore, the results support H8.

H9: News learning motivation will be positively related to news learning.

This hypothesis proposed that news learning motivation will have a positive relationship with the level of news learning based on uses and gratification studies. The relationships between news learning motivation and the amount TV news viewing in the two situations are presented in Table 23.

Table 23. The Relationships between News Learning Motivation and the Level of News Learning

	Broadcast-Only	Multi-Channel
Correlation	.3611**	.2661***
вета	•2482*	.0991

\* p< .05 \*\* p< .01 \*\*\* p< .001

Table 23 shows that news learning motivation and the level of news learning is significantly correlated in both situations, even though Beta coefficients (the unique contribution of news learning motivation to news learning) are insignificant in a multi-channel situation (that means news learning motivation plays its role by interplaying with other variables in this situation). Therefore, the results confirm H9.

H10: Multi-channel TV subscribers will perceive TV news as providing more variety in news stories than nonsubscribers. H11: Multi-channel TV subscribers will perceive TV news as providing more in-depth news stories than nonsubscribers.

H12: Multi-channel TV subscribers' evaluation of TV in gratifying news learning motivations (content seeking) will be higher than non-subscribers.

Hypotheses 10, 11, and 12 proposed that TV viewers in a multi-channel situation will perceive TV as a better news medium than TV viewers in a broadcast-channel-only situation will. To test these sets of hypotheses, the evaluation of TV in providing various news stories, the evaluation of TV in providing in-depth news stories, and the evaluation of TV in gratifying one's news learning motivation between broadcast-channel-only TV viewers and multi-channel TV viewers were compared. Table 24 shows the t-test results of the differences between them.

Table 24.

The Comparison of Broadcast-Channel-Only Viewers and Multi-channel TV Viewers Regarding the Evaluations of TV as a News Medium.

		Cases	Mean	SD	t	DF	Sign
Variety	Broadcast	93	63.73	25.46	2 95	297	.005
	Multi-channel	206	71.50	19.99	2.09		
In-Depth	Broadcast	95	59.37	26.51	2 64	299	.000
	Multi-channel	206	69.81	21.40	3.04		
Motivation Gratifi- cation	Broadcast	91	3.37	1.00	5 21	283	.000
	Multi-channel	194	3.93	.72	2.21		

According to Table 24, in all three aspects of evaluations broadcast-channel-only TV viewers and multichannel TV viewers show substantial differences. First, with regard to variety evaluation (measured by 0 - 100 evaluation scale), multi-channel subscribers give about 8 points higher evaluation to TV. Secondly, with regard to in-depth evaluation (measured by 0 - 100 evaluation scale), multi-channel subscribers show more than 10 points higher evaluation of TV. Finally, with regard to the evaluation of the news learning motivation gratification (measured by 5 point scale), multi-channel subscribers show an average response close to "good (4)" while broadcast-channel-only viewers, close to "neutral (3)." Therefore, the results support these three hypotheses.

H13: The amount of TV news viewing will be related to news learning more strongly in a multi-channel situation than in a broadcast-channel-only situation.

H14: In a multi-channel situation, the amount of 24hour news viewing will be related to news learning more strongly than the amount of broadcast news viewing.

H13 proposed that since multi-channel TV tends to provide more variety in news stories and indepth news coverage as well as allowing a more flexible program choice (which will reduce the ceiling effect), the amount of TV news viewing will have a stronger relationship with the level of news learning in a multi-channel situation than it will in a broadcast-channel-only situation. In the same vein, H14 proposes that since 24-hour news provides more variety in news stories and indepth news coverage than broadcast news, the amount of 24-news viewing will have a stronger relationship with news learning than the amount of broadcast news viewing.

In a multi-channel situation, the amount of TV news viewing was computed by adding the amount of broadcast news viewing and 24-news viewing together. Then, the correlation and Beta coefficient between this total amount of TV news viewing and news learning were produced. Table 25 shows the correlation and Beta coefficients between (a) the news knowledge and broadcast news viewing in a broadcast-channelonly situation, (b) the news knowledge and broadcast news viewing in a multi-channel situation, (c) the news knowledge and 24-hour news viewing, and (d) the news knowledge and total TV news viewing in a multi-channel situation.

Table 25. The Relationship between TV News Viewing and the Level of News Learning

	Broadcastl	Broadcast2	24-News	Total News
Correlation	.3268**	.0115	.2254**	.1420
Beta	.3290**	1047	.1098	.0255

Broadcast1: broadcast-channel-only situation Broadcast2: multi-channel situation Total news: broadcast news + 24-hour news \* p< .05 \*\* p< .01 \*\*\* p< .001

According to this table, TV news viewing in a broadcast-channel-only situation is highly related to the level of news learning. On the contrary, (total) TV news viewing in a multi-channel situation is not significantly related to the level of news learning. Therefore, H13 is not supported from the results. In a multi-channel situation, when we compare the relationships between broadcast news viewing and the level of news learning and and the relationship between 24-hour news viewing and the level of news learning, the latter shows significant correlation while the former does not. These results support H14.

## CHAPTER V

DISCUSSION AND CONCLUSION

## Introduction

In Chapter I, two research questions were presented which guided the direction of this study. The answers to and the results of the empirical evidence associated with these questions have been presented in some detail in Chapter IV. This chapter will summarize the main findings and discuss their implications. A second purpose of this chapter is to note some of the contributions and limitations of this research. Finally, some suggestions for future research are presented.

# Interpretation of Key Findings

The research questions posed in Chapter I asked how the development of multi-channel TV changes TV news viewing and news learning from it. In order to answer these questions, the major differences in TV news viewing and news learning from it between a broadcast-channel-only and a multi-channel situation were analyzed through the cross-sectional comparison of these two situations.

Based on past mass media and relevant psychology literature, this study proposed fourteen hypotheses

regarding the relationships between various theoretical factors and two major dependent variables (TV news viewing and news learning). Hypotheses 1 to 7 were relevant to the changes in TV news viewing, and hypotheses 8 to 14 were relevant to the changes in news learning from TV news viewing. As was presented in Chapter IV, some of these hypotheses were supported and some were not. In this section, the implications of these hypotheses test results will be discussed.

## Development of Multi-Channel TV and TV News Viewing

SES and TV news viewing. Hypothesis 1 predicted that socio-economic status (SES) will become a significant predictor of the amount of TV news viewing due to the development of multi-channel TV. This hypothesis was proposed based on past knowledge gap studies, based particularly on interest maximization theory (Jeffres, 1978a). According to this theory, it is assumed that (a) high SES people have stronger news interest/selectivity than low SES people and (b) these differences in news interest will result in different amounts of TV news viewing between these two groups when the development of multi-channel TV facilitates program choice based on individualized program type interest (interest maximization).

From this theory, it was expected that SES would show a substantial positive relationship with the amount of TV news viewing in a multi-channel situation. This hypothesis,

however, was not supported. Actually, the results -- (a) the negative correlation and Beta coefficients throughout three different situations and (b) the stronger (significant) negative relationship found in a multi-channel situation -- strongly suggest that the relationship between SES and TV news viewing (especially broadcast news viewing) is opposite from what was proposed in this study. The results also indicate that the relationship between SES and TV news viewing tends to become stronger due to the development of multi-channel TV.

Therefore, this finding leads us to the following reinterpretations of the results regarding interest maximization theory, the relationship between SES and TV news viewing, and the changes in the relationship between SES and the amount of TV news viewing due to the development of multi-channel TV: (a) the development of multi-channel TV facilitates interest maximization (or program choice based on individualized program type interest), (b) SES tends to have a latent negative relationship with TV news viewing, and (c) the development of multi-channel TV realizes this latent negative relationship between SES and TV news viewing to an actual relationship.

Even though the prediction has been wrong with regard to the direction of the relationship, this study did find that the development of multi-channel TV strengthens (or realizes) the existing (or latent) relationship between SES and TV news viewing. This supports the interest maximization theory. Another support for the interest maximization theory comes from Youn's study (1993a) which investigated the relationship between program type preferences and program choices in a broadcasting-channelonly and a multi-channel situation. According to this study, when program type preferences were elaborately measured and other moderating variables were carefully controlled, multi-channel TV viewers gratified their program type preferences twice as well as broadcast-channel-only TV viewers.

The support for the second interpretation is widely available from past mass media audience studies (Becker & Whitney, 1980; Brinton & McKown, 1961; Browne, 1978; McClure & Patterson, 1976; Robinson, 1974, 1975). These studies consistently found that high SES people tend to depend on printed media (newspaper) as their primary news source, while low SES people, on TV news.

In this study, too, when the relationship between SES and the primary news source was analyzed, the same result was found. Table 27 shows that high SES people tend to consider the newspaper as their primary news source, while low SES people, TV, <u>Chi-square</u> = 19.46, <u>DF</u> = 4, <u>p</u> < .001. Therefore, high SES people may perceive TV not so much as a news medium as they may perceive the newspaper as a news

Table 26. Primary News Sources among Different SES Groups

	SES1	SES2	SES3	SES4	SES5	total
Newspaper	15 (10.7)	44 (31.4)	53 (37.9)	18 (12.9)	10 (7.1)	140 (100.0)
TV	1 (1.2)	14 (16.5)	38 (44.7)	16 (18.8)	16 (18.8)	85

Chi-Square 19.46041 DF = 4 Significance = .00064

SES1: grade school only or did not finish high school SES2: high school graduate

SES3: vocational or technical school or some college

SES4: college graduate

SES5: post graduate work or graduate degree

medium. Put differently, for them TV may be considered primarily as an entertainment medium.

If this is the case, then, when TV provides far expanded options of program choices in both news and entertainment, the direction of interest maximization for high SES people is to turn to more non-news programs and less news programs. On the contrary, low SES people, who consider TV news as relatively more an important news source, will consume the same (or even an increased) amount of TV news programs compared to high SES groups when multichannel TV provides far expanded options of program choices in both news and entertainment.

<u>CGE-TV/RCGE-TV and TV news viewing</u>. Hypothesis 2 and 3 predicted that in a broadcast-channel-only situation, content gratification expectancy of TV (CGE-TV) will be a significant predictor of the amount of TV news viewing, while in a multi-channel situation, relative content gratification expectancy of TV (RCGE-TV) will be an important predictor. These hypotheses were proposed based on past uses and gratification studies, particularly based on the distinction between content seeking (motivations) and process seeking (motivations), and the expectancy-value theory. The results supported these two hypotheses.

These results have two important implications. First, the theoretical discussion on CGE-TV and RCGE-TV turned out to be valid. CGE-TV and RCGE-TV are original theoretical

concepts developed by this research. Even though a few researchers (Babrow & Swanson, 1988; Galloway & Meek, 1981; Palmgreen & Rayburn, 1982 & 1983) already applied the expectancy value theory to TV news viewing, one of the most important theoretical tasks for a meaningful application of this theory was generally ignored by them -- the investigation of values. Without knowing what values are and what values are not relevant to an object (in this study, TV news viewing), the expectancy value theory has little meaning in practical sense. By clarifying these values based on the theoretical distinction between content seeking and process seeking in uses and gratification studies, this study could conceptualize CGE-TV as an indicator of TV news viewing intention when program choice is limited and TV viewing in news hours is almost compulsory, and RCGE-TV as an indicator of TV news viewing intention when program choice is unlimited and TV viewing in traditional news hours is not necessarily compulsory. The fact that these two variables show the predicted relationship patterns with the amount of TV news viewing is good evidence to support their theoretical validity.

The second important implication of the results is found from the different relationships which CGE-TV and RCGE-TV have with broadcast news and 24-hour news viewing. The fact that CGE-TV is substantially related to broadcast news viewing means that in broadcast news viewing, even

though content seeking is the primary factor, process seeking can also be involved with TV news viewing. On the contrary, the fact that RCGE-TV is substantially related to 24-hour news viewing means that 24-hour news viewing happens when a viewer pursues content seeking and only content seeking (or little process seeking). If a viewer pursues process seeking as well as content seeking, it can lead him/her to different programs. Put differently, TV news viewing for the purpose of entertaining or escaping is less likely to happen in a multi-channel situation. In a more general sense, this is interpreted as evidence of motivational segmentation in TV viewing which is expected to become more prevalent as the channel segmentation due to the development of multi-channel TV goes on.

Roles of other factors. Hypothesis 4 predicted that viewer availability will become a less significant predictor of the amount of TV news viewing as the development of multi-channel TV goes on. This hypothesis was supported from the results. While viewer availability had a prevalent relationship with the amount of TV news viewing in a broadcast-channel-only situation, it showed a weaker relationship with the amount of broadcast TV news viewing in a multi-channel situation and no significant relationship with the amount of 24-hour news viewing.

These results clearly indicate that the role of structural constraining factors, such as the amount of

programming and programming schedule, etc. in program choice and viewing, will become weaker as the development of multichannel TV goes on. With regard to TV news viewing, these results have two implications: (a) TV news viewing will not be confined to a certain time, and (b) incidental or compulsory TV news viewing in the course of TV viewing during traditional TV news hours will happen less often. Therefore, as the development of multi-channel TV goes on, the universal TV news viewing phenomenon of a limited number of TV news programs at a certain time is expected to become weaker, if not completely disappear.

Hypothesis 5 predicted that in a multi-channel situation, news channel awareness will be substantially related to 24-hour news viewing. This hypothesis, however, was not supported. These results indicate that news channel awareness is not substantially related to the amount of TV news viewing. Several explanations can be given regarding these results. The first explanation is the problem in measurement. In this study, news channel awareness was measured by asking people whether they recognized the programming content of two specialized 24hour news channels, C-SPAN and C-NBC. We cannot exclude the possibility that some people could not answer the questions well because they simply did not recognize the exact channel names, even though they had good awareness of the actual content of these channels. Also, the awareness of C-NBC

channel content may not be a valid measure of news channel awareness. C-NBC may be too specialized a business channel to mean news to many people. The second explanation is that news channel awareness as a type of knowledge is affected by many other factors as well as by the amount of TV news viewing. For example, a significant correlation was found between SES and news channel awareness,  $\mathbf{r} = .4515$ ,  $\mathbf{p} < 001$ . Finally, awareness might not be the sufficient condition for TV news viewing, even if it is a necessary condition. In other words, even though news channel awareness is required for the viewing of these specialized news channels, this awareness may not necessarily lead to the viewing of these channels.

Hypothesis 6 predicted that in a multi-channel situation, the inclusion of news channels in the channel repertoire will be substantially related to 24-hour news viewing. This hypothesis was supported by the results. These results confirm the notion that as the number of available channels increases, channel repertoire as a form of predisposition toward channels will play a more important role (Heeter & Greenberg, 1988). Hypothesis 7 predicted that in a multi-channel situation, the (monetary) value perception of news channels will be substantially related to

TV news viewing. This hypothesis also achieved significant support from the results.<sup>1</sup>

### Development of Multi-Channel TV and News Learning

TV news viewing. This study proposed that, since news learning from TV news viewing is not likely to be affected (reduced) by ceiling effect so much as is the case in a broadcast-channel-only situation, this will bring changes in viewers' perceptions of TV as a news medium and the actual news learning of TV news viewing. In hypotheses 10, 11, and 12, it was predicted that multi-channel TV viewers would perceive TV as a better news medium than broadcast-channelonly TV viewers in terms of news variety (H10), depth of coverage (H11) and the expectancy of news learning motivation gratification ( $\Sigma E_1$ ) (H12). Hypothesis 13 predicted that TV news viewing will show a stronger correlation with the level of news learning in a multichannel situation. In the same vein, hypothesis 14 predicted that 24-hour news viewing will show a stronger relationship with the level of news knowledge since 24-hour news will be less affected by the ceiling effect.

<sup>&</sup>lt;sup>1</sup>Here, one may question the theoretical meaningfulness or uniqueness of value perception. However, the examination of the correlations between value perception and other independent variables reveals that value perception is significantly correlated with only one variable, the inclusion of 24-hour news channels in channel repertoire, <u>r</u> =2367, <u>p</u> < .05. This indicates the uniqueness of value perception as a variable.

The hypothesis testing results turned out to be somewhat inconsistent. The first three hypotheses (H10, 11, and 12) regarding the changes in viewers' perception of TV as a news medium, and the last hypothesis (H14) regarding the relative roles of broadcast news and 24-hour news viewing in news learning in a multi-channel situation were supported from the results. However, the hypothesis regarding the differences of the relationships between TV news viewing and news learning between a broadcast-channelonly and multi-channel situations (H13) was not supported. Contrary to the expectation, the results turned out to be just the opposite from what was proposed by H13; TV news viewing was significantly correlated to the level of news learning in a broadcast-channel-only situation, while it was not in a multi-channel situation.

These results indicate that, even though TV is not as good a news medium in a broadcast-channel only situation as it is in a multi-channel situation and viewers perceive this fact well, the relative importance of TV as a news medium is still greater among broadcast-channel-only TV viewers than multi-channel TV viewers. Then we need to ask why this is the case.

One possible answer can be found from the measurement of the amount of total news viewing in a 24-hour situation. In this study, the amount of total news viewing was computed by adding (a) the days in a week to watch broadcast news and

(b) the days in a week to watch 24-hour news. This measurement of total news viewing, however, is prone to error since we do not know whether (a) and (b) are identical in terms of measurement scale.

If we assume that this measurement was valid, one plausible answer for this question can be suggested from the differences in the media environment between broadcastchannel-only TV viewers and multi-channel TV viewers. Put differently, broadcast-channel-only TV viewers may live in a relatively limited media environment compared to multi-Therefore, for broadcast-channel-only channel subscribers. TV viewers, the easily and widely available TV news may be the dominant (if not the only) news source of important social events. In this case, the amount of TV news viewing will be directly related to the level of news learning. On the contrary, multi-channel subscribers who live in relatively unlimited media environment may have a variety of news sources about important social events compared to broadcast-channel-only TV viewers. Therefore those who do not watch TV news still can get informed from other news sources.<sup>2</sup> In this case, the amount of TV news viewing will not show a very strong relationship with the level of news learning.

<sup>&</sup>lt;sup>2</sup>Actually, positive correlations were found between the amount of other media exposure (newspaper reading, radio news listening, and interpersonal communication) and the level of news learning in a multi-channel situation.

Past studies which investigated the overall media uses of multi-channel TV subscribers and non-subscribers (Becker et.al., 1983; Collins et.al., 1983; LaRose & Atkin, 1988; Rothe et.al., 1983), however, do not provide consistent findings regarding the differences in the media environments between these two groups, even though some of these studies (LaRose & Atkin, 1988; Rothe et.al., 1983) suggest that multi-channel TV subscribers tend to use other media more. Thus, until we can accumulate more evidence, the status of the explanation presented above will remain tentative.

Roles of other factors. Besides TV news viewing, this study examined the relationships between such factors as SES, news viewing motivations, other media uses, and the level of news learning. Hypothesis 8 predicted that SES will have a positive relationship with news learning due to the differences in cognitive skill and prior knowledge (internal representation) of different SES groups. The results supported this hypothesis. The results also supported hypothesis 9 which predicted a positive relationship between news learning motivation (content seeking) and news learning.

Even though this study did not hypothesize the relationship specifically, it was expected that the amount of other media exposure would be positively related to news learning. Especially, as was consistently found from past studies (Atkin et. al., 1976; Becker & Whitney, 1980; Becker, et. al, 1978; Israel & Robinson, 1972; Katz et. al, 1977; McClure & Patterson, 1976; Miller & MacKuen, 1979; Nordenstreng, 1972; Robinson, 1972 and 1974; Robinson & Levy, 1986), newspaper reading was expected to have a stronger relationship with the level of news learning than TV news viewing. However, the relationships between other media exposure (particularly newspaper reading) and news learning turned out to be not as strong as were expected. In a broadcast-channel-only situation, none of the other media factors showed significant correlations with news learning (see Table 20). In a multi-channel situation, even though significant correlations were found, the sizes of correlations were still relatively small (see Table 22).

One explanation for this small effect of other media factors can be provided from the measurement of news learning used in this study; the awareness of six major news events. The actual questions used to tap in the awareness of these events focused on the very basic aspects (partly due to the limitation of the telephone interview) rather than the relatively complicated aspects of these news events. In this case, this measurement might not have discerned the differences in the news learning level of the more sophisticated aspects of these events to which other media exposure, especially newspaper reading, is likely to contribute. Put differently, if the news awareness questions asked more detailed aspects of these events, then

newspaper reading would have shown a stronger relationship with the level of news learning. Another explanation is that newspaper reading may not be for news but for other information such as shopping information or features, while TV news viewing is mostly for news. In other words, more selectivity exists in newspaper reading through which readers can avoid news. This may be why newspaper reading showed a weaker relationship with the level of news learning than TV news viewing.

## Contributions of This Research

In answering the questions of how the development of multi-channel TV affects TV news viewing and news learning from it, this study makes several contributions.

First, the factors identified by this study turned out to be highly relevant and explanatory in investigating TV news viewing and news learning. For example, with regard to TV news viewing, the factors included in the analyses could explain about 40 to 70 percent of the whole variance. In case of news learning, 34 to 42 percent of the whole variance was explained.

Secondly, the investigation of the relationships between these factors and TV news viewing and news learning throughout this study provides important implications on how TV news viewing and news learning from it will change as the development of multi-channel TV goes on. For example, this

study clearly shows that in a multi-channel situation the impact of programming or availability factors, which override individual difference factors and lead to universal TV viewing phenomenon, will become less important. On the contrary, this study found some evidence that such trends as the maximization of personalized program type interest (interest maximization) and the high degree of motivational segmentation (RCGE-TV) will become more prevalent in TV viewing including TV news viewing. These findings generally indicate that TV news viewing will become more an individual phenomenon rather than a social phenomenon. They also indicate that the role of TV news as the common base of news learning will become seriously weakened (if not completely disappear) as the development of multi-channel TV goes on.

Thirdly, the theoretical elaboration with regard to expectancy value theory and knowledge gap hypothesis is an important contribution of this study. More specifically with regard to the expectancy value theory, this study could clarify what constitutes the major value components in the expectancy value equation when this theory is applied to TV news viewing. With regard to the knowledge gap hypothesis, the discussion about the cognitive skill and prior knowledge (internal representation) based on cognitive psychology literature provides an important theoretical bridge between SES and news learning which has been generally missing or ignored from past knowledge gap studies. This is an

important step toward the knowledge gap theory from the knowledge gap hypothesis.

Finally, with regard to news learning from TV news viewing, this study provides an important implication. By re-interpreting the findings from past studies, this study maintains that news learning from TV news viewing is not as limited as past studies made us believe. Actually, this study found substantial evidence that, in terms of the baseline awareness of major news events, TV news viewing is as important as, or more important than, other media exposure.

## Suggestions for Future Studies

This study has several limitations. First, since the data gathering for this study was carried out in comparatively limited local areas covered by one multichannel TV system, it is unclear to what degree the results can be generalized. Secondly, as was discussed previously in this research, the replacement of repeated group analysis (comparison of the same people before and after multichannel subscription) by cross-sectional analysis (comparison of the multi-channel subscribers and nonsubscribers) was inevitable, but it still limited the analyses in many aspects, especially in analyzing news learning from TV news viewing. Thirdly, some of the factors used in this study need more theoretical elaboration. For

example, with regard to channel repertoire and value perception, one common question arises; what factors would decide the inclusion of news channels in channel repertoire or value perception of news channels initially? Without answering this question, the meaningful interpretations of the findings related to these factors will be very limited. Finally, throughout this study, the independent variables turned out to be highly correlated. Therefore, in order to evaluate the true relationships between these factors and the dependent variables as validly as possible, both correlation and Beta coefficients were used complementarily. Still, it should be noted that no methodological solution provides a valid guide toward true relationships in this multi-collinearity situation. The only true solution is theoretical; that is, identify the theoretical relationships among independent variables and reflect them in the analyses.

In order to overcome the limitations in this study and extend its scope, this study suggests the following as the major directions for future studies. First, it is necessary to replicate this study with different samples in order to check the external validity of the findings. Secondly, if possible (e.g., in an area where multi-channel TV has been newly introduced), repeated group analysis is strongly suggested even with a relatively smaller sample size in order to test the hypotheses proposed in this study more

validly, particularly the changes in news learning from TV news viewing. Thirdly, further theoretical elaboration of the individual factors included in this study and the relationships between them are necessary for more valid methodological analyses and interpretation. Finally, future studies need to expand the scope of this study by investigating how the development of multi-channel TV affects other aspects of TV news viewing. For example, it is speculated that one of the most fruitful topics for future research is to identify how TV news viewing patterns (e.g., duration of viewing, channel changes among various news programs/stories, attentiveness, depth and breadth of TV news story exposure, etc.) are affected by the development of multi-channel-TV.

APPENDIX I

THE DESCRIPTIONS OF 6 NEWS EVENTS
# Appendix I.

### The Descriptions of 4 News Events

### The War in Bosnia

Three main groups exist in the former Yugoslavia; the Serbs, Bosnians, and the Croats. The Yugoslavian crisis commenced during the month of March 1991 due to the independence movements of the Balkans. In May 1991, Croatia called for independence which was protested by the Serbs in that province. With this and other problems emerging, a civil war broke out when the Serbian president, Slobodan Milosevic, tried to bring Croatia under Serbian control. Yugoslavia was being pulled apart by three major provinces of Serbia, Bosnia Hercegovina and Croatia. Serbia is the most powerful in weaponry and other aspects. On March 1, 1992 the Bosnians voted for independence which was approved a month later by the European community and the This caused a break out of tension amongst United States. the different ethnic groups in Bosnia. In April 1992, Serbian forces supported by air warfare, tanks and heavy artillery invaded Bosnian towns and seized 80 percent of the land. Then, the violence against Bosnians and Croats, similar to Nazi genocide, started and is still going on.

## G-7 Summit Meeting in Tokyo

G-7 Summit Meeting is an annual meeting of seven industrialized demographic country leaders (Britain, Canada, France, Germany, Italy, Japan, and the U.S.). In this year's meeting, those issues of expanding trade and extending more generous aid to Russia, etc. were discussed. An important U.S-Japanese agreement emerged unexpectedly after the formal summit ended. The U.S. had sought a "framework" agreement with Japan to guide future negotiations aimed at reducing Japan's enormous surpluses in trade with the U.S. (nearly \$50 billion a year currently). The Japanese pledged "to achieve a highly significant decrease" in the trade surplus and to negotiate "sets of objective criteria" for gauging progress. This agreement is considered as an important first step which should lead to more Japanese buying of American goods and services -- autos and parts, computers, telecommunications equipment, insurance and financial services.

### The Flood in the Midwest

This summer (during July and August), one of the biggest floods in the U.S. history struck the upper Mississippi areas. The flooding of the Mississippi and Missouri and tributaries has contributed to the deaths of 48 people and caused at least \$ 10 billion in damage, flooding 17 million acres in nine states in the mid-west (by the 2nd of Aug). Congress passed a \$4.7 billion relief package for the flood victims.

### Gavs in the Military

President Clinton announced a policy (July 19th) allowing gays and lesbians to serve in the military, but only if they are discreet and don't engage in homosexual conduct. The policy falls far short of what Clinton promised during last year's presidential campaign: an unqualified lifting of the armed services' 50 year old ban on homosexuals. Clinton's policy, released after a sixmonth study by Pentagon officials, has been dubbed "don't ask, don't tell, don't pursue." It permanently would forbid recruits from being asked if they are homosexual and would end military "witch hunts" of suspected gays and lesbians. It would permit homosexuals a "zone of privacy" as long they don't engage in homosexual acts.

# APPENDIX II

# TELEPHONE SURVEY QUESTIONNAIRE

# Appendix 2.

### Telephone Survey Ouestionnaire

- >U1< Before we begin, let me tell you that any information you give me will be kept strictly confidential. Let me also tell you that this interview is completely voluntary. Should we come to any question that you don't want to answer, just let me know and we'll go on to the next question.
- >Al< First, how long have you lived in Michigan?

<1> LESS THAN 1 YEAR <2> 1 TO 3 YEARS <3> 4 TO 6 YEARS <4> 7 TO 10 YEARS <5> MORE THAN 11 YEARS

<8> DO NOT KNOW
<9> REFUSED - NO ANSWER

- >A2< Do you subscribe to cable televison?
  - <1> YES <5> NO

<8> DO NOT KNOW <9> REFUSED - NO ANSWER

- >A3< Do you read the newspaper?
  - <1> YES <5> NO
  - <8> DO NOT KNOW
    <9> REFUSED NO ANSWER

>B1< Next, I would like to read you several statements and have you tell me to what extent you agree or disagree with each statement.

I try to make myself a more knowledgeable person from what I read or view.

Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?

<1> STRONGLY AGREE <2> SOMEWHAT AGREE <3> NEUTRAL <4> SOMEWHAT DISAGREE <5> STRONGLY DISAGREE <8> DON'T KNOW

- <9> REFUSED NO ANSWER
- >B2< I am the type of person who feels left out if I'm not familiar with what's going on in society.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

- <1> STRONGLY AGREE
- <2> SOMEWHAT AGREE
- <3> NEUTRAL
- <4> SOMEWHAT DISAGREE
- <5> STRONGLY DISAGREE
- <8> DON'T KNOW
- <9> REFUSED NO ANSWER
- >B3< If I can be entertained from what I read or view, I don't care much about the informational content.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

<1> STRONGLY AGREE <2> SOMEWHAT AGREE

- <2> SOMEWAAT AGRES
- <3> NEUTRAL
- <4> SOMEWHAT DISAGREE
  <5> STRONGLY DISAGREE
- <5> SIRONGLI DISAGREE
- <8> DON'T KNOW
- <9> REFUSED NO ANSWER

>B4< It is important to me to have well-informed opinions about controversial issues.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

<1> STRONGLY AGREE
<2> SOMEWHAT AGREE
<3> NEUTRAL
<4> SOMEWHAT DISAGREE
<5> STRONGLY DISAGREE

- <8> DON'T KNOW
  <9> REFUSED NO ANSWER
- >B5< I tend to turn to what I read or view just to pass the time.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

- <1> STRONGLY AGREE
- <2> SOMEWHAT AGREE
- <3> NEUTRAL
- <4> SOMEWHAT DISAGREE
- <5> STRONGLY DISAGREE
- <8> DON'T KNOW
- <9> REFUSED NO ANSWER
- >B6< I tend to avoid complicated material that I have to try hard to understand.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

- <1> STRONGLY AGREE <2> SOMEWHAT AGREE <3> NEUTRAL <4> SOMEWHAT DISAGREE <5> STRONGLY DISAGREE
- <8> DON'T KNOW
  <9> REFUSED NO ANSWER

>B7< I like to hear the ideas of others, in order to have more objective ideas of my own.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

<1> STRONGLY AGREE <2> SOMEWHAT AGREE <3> NEUTRAL <4> SOMEWHAT DISAGREE <5> STRONGLY DISAGREE

<8> DON'T KNOW
<9> REFUSED - NO ANSWER

>B8< I tend to read or view material to relax rather than to gather new information.

(Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?)

- <1> STRONGLY AGREE <2> SOMEWHAT AGREE <3> NEUTRAL <4> SOMEWHAT DISAGREE <5> STRONGLY DISAGREE
- <8> DON'T KNOW
  <9> REFUSED NO ANSWER

(if the answer for A2 is 1, go to C1a; If the answer for A2 is 5, go to C1b)

>Cla< The next set of questions are about your television viewing habits. Through out the survey, television refers to both broadcast and cable television.

On average, how many days per week do you watch television from 6 to 7 pm?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER >Clb< The next set of questions are about your television
viewing habits.</pre>

On average, how many days per week do you watch television from 6 to 7 pm?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<5> 6 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER

>C2< On average, how many days per week do you watch TV from 11 PM to 12 midnight?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<5> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER

>C3< On average, how many hours per day do you spend watching television?

<0-24>

<98> DON'T KNOW <99> REFUSED - NO ANSWER >D1< Do you watch the local evening news or the network news on television?

<1> YES, LOCAL EVENING NEWS (SKIP D1b) <2> YES, NETWORK NEWS (SKIP D1a) <3> BOTH LOCAL AND EVENING NEWS <5> NO (SKIP D1a and D1b)

<8> DON'T KNOW (SKIP D1a and D1b)
<9> REFUSED - NO ANSWER (SKIP D1a and D1b)

>Dla< On average, how many days per week do you watch the local evening news?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER

>D1b< On average, how many days per week do you watch the network news (ABC,CBS, NBC or PBS)?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER <98> DON'T KNOW <99> REFUSED - NO ANSWER

(IF A2 is 5, Skip E1 to E6)

- >E1< Do you subscribe to premium cable channels? (such as HBO, Showtime, Cinemax, or Disney)?
  - <1> YES <5> NO <8> DON'T KNOW <9> REFUSED - NO ANSWER
- >E2< Do you watch the specialized cable news channels, such as CNN, CNN headline news, C-SPAN, or C-NBC?

<1> YES <5> NO [go to E5] <8> DON'T KNOW[go to E5] <9> REFUSED - NO ANSWER

>E2a< If you had to, would you pay an additional fee to recieve these news channels?

<1> YES <5> NO

<8> DO NOT KNOW <9> REFUSED

>E3< On average, how many days per week do you watch these channels?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO

ANSWER[##md1=99][##md2=0][##blank=0]

>E4< On average, how many hours per day do you spend watching these news channels (such as CNN, CNN headline news, C-SPAN, or C-NBC)?

<0-24> HOURS

<98> DON'T KNOW <99> REFUSED - NO

- ANSWER[##md1=99][##md2=0][##blank=0] ===>
- >E4a< People tend to turn to a set of cable channels intentionally, and other channels, unintentionally by channel hopping.

Would you say you turn to CNN or other cable news channels intentionally or unintentionally?

<1> CHANNELS TURNED TO INTENTIONALLY <5> CHANNELS TURNED TO UNINTENTIONALLY

<8> DON'T KNOW
<9> REFUSED - NO ANSWER

- >E5< Can you tell me what type of programming is shown on C-SPAN?
  - <1> YES: SPECIFY PROGRAMMING <5> NO [go to E6]
  - <2> US HOUSE AND SENATE (CONGRESS)
  - <3> MICHIGAN HOUSE AND SENATE (LEGISLATURE)
  - <4> NEWS BROADCASTS
  - <6> GOVERNMENT HEARINGS (CONGRESSIONAL)
  - <7> COURT CASES-TRIALS
  - <8> TALK SHOWS: LARRY KING, CROSSFIRE, ETC
  - <9> POLITICAL BROADCASTS
  - <10> SPANISH CHANNEL
  - <11> SPORTS CHANNEL
  - <12> DOCUMENTARIES
  - <13> WORLD NEWS
  - <14> LOCAL GOVERNMENT
  - <15> ENVIRONMENTAL PROGRAMMING
  - <16> BUSINESS-STOCKS
  - <17> EDUCATIONAL
  - <18> MOVIES

<97> OTHER: SPECIFY

<99> REFUSED - NO ANSWER

- >E6< Can you tell me what type of programming is shown on C-NBC?
  - <1> YES: SPECIFY TYPE OF PROGRAMMING
  - <5> NO
  - <2> TALK SHOWS-INTERVIEWS
  - <3> NEWS BROADCASTS-INFORMATIONAL PROGRAMMING
  - <4> BUSINESS SHOWS-BROADCASTS
  - <6> FINANCIAL PROGRAMMING (STOCKS-WALL STREET)
  - <7> DOCUMENTARIES
  - <8> CHRISTIAN BROADCASTS
  - <9> STITUATION COMEDIES
  - <10> COURT CASES-TRIALS
  - <11> GOVERNMENTAL PROGRAMS
  - <12> SPORTS
  - <13> EDUCATIONAL
  - <14> SOAP OPERAS
  - <97> OTHER: SPECIFY
  - <99> REFUSED NO ANSWER
- >F1< The next set of questions deal with how you rate television.

How would you rate television as a way of entertaining you. Would you say it is very good, somewhat good, somewhat poor or very poor.

- <1> VERY GOOD
- <2> SOMEWHAT GOOD
- <3> NEUTRAL
- <4> SOMEWHAT POOR
- <5> VERY POOR
- <8> DON'T KNOW
  <9> REFUSED NO ANSWER
- >F2< How would you rate television as a way to relax? (Would you say it is very good, somewhat good, somewhat poor or very poor.)
  - <1> VERY GOOD
  - <2> SOMEWHAT GOOD
  - <3> NEUTRAL
  - <4> SOMEWHAT POOR
  - <5> VERY POOR
  - <8> DON'T KNOW
    <9> REFUSED NO ANSWER

- >F3< (How would you rate television) as a way to make you more knowledgeable. (Would you say it is very good, somewhat good, somewhat poor or very poor.) <1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL <4> SOMEWHAT POOR <5> VERY POOR <8> DON'T KNOW <9> REFUSED - NO ANSWER >F4< (How would you rate television) as a tool for helping you develop well-informed opinions about controversial issues. (Would you say it is very good, somewhat good, somewhat poor or very poor.) <1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL
  - <4> SOMEWHAT POOR
  - <5> VERY POOR

<8> DON'T KNOW <9> REFUSED - NO ANSWER

>F5< (How would you rate television) at presenting other people's ideas that can be compared to yours?

(Would you say it is very good, somewhat good, somewhat poor or very poor.)

- <1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL
- <4> SOMEWHAT POOR
- <5> VERY POOR
- <8> DON'T KNOW
  <9> REFUSED NO ANSWER

>F6< (How would you rate television) as a way to pass the time.</p>

(Would you say it is very good, somewhat good, somewhat poor or very poor.)

<1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL <4> SOMEWHAT POOR <5> VERY POOR

<8> DON'T KNOW <9> REFUSED - NO ANSWER

>F7< (How would you rate televsion) as a way to escape from complicated daily material.

(Would you say it is very good, somewhat good, somewhat poor or very poor.)

<1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL <4> SOMEWHAT POOR <5> VERY POOR

<8> DON'T KNOW <9> REFUSED - NO ANSWER

>F8< (How would you rate television) as a way of making you familiar with what is going on in society.

(Would you say it is very good, somewhat good, somewhat poor or very poor.)

<1> VERY GOOD <2> SOMEWHAT GOOD <3> NEUTRAL <4> SOMEWHAT POOR <5> VERY POOR

<8> DON'T KNOW <9> REFUSED - NO ANSWER



>G1< On a scale of 0 to 100, (where 100 is the highest rating and 0 is the lowest rating), how would you rate television as a method of providing a variety of news stories?

<0 - 100> POINTS

<998> DON'T KNOW <999> REFUSED - NO ANSWER

>G3< On a scale of 0 to 100, (where 100 is the highest rating and 0 is the lowest rating), how would you rate television as a method of providing in-depth news coverage?

<0 - 100> POINTS

<998> DON'T KNOW <999> REFUSED - NO ANSWER

>H1< Next, I would like to ask you a couple of questions about reading the newspaper and listening to the radio.

On average, how many days per week do you read the newspaper?

<1> 1 DAY PER WEEK
<2> 2 DAYS PER WEEK
<3> 3 DAYS PER WEEK
<4> 4 DAYS PER WEEK
<5> 5 DAYS PER WEEK
<5> 6 DAYS PER WEEK
<6> 6 DAYS PER WEEK
<7> EVERYDAY
<8> NEVER

<97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER

- >H1a< On average, how many days per week do you listen to the news on the radio?
  - <1> 1 DAY PER WEEK <2> 2 DAYS PER WEEK <3> 3 DAYS PER WEEK <4> 4 DAYS PER WEEK <5> 5 DAYS PER WEEK <6> 6 DAYS PER WEEK <7> EVERYDAY <8> NEVER
  - <97> OTHER <98> DON'T KNOW <99> REFUSED - NO ANSWER
- >H2< On average, how many days per week do you talk about news stories with your family or friends?
  - <1> 1 DAY PER WEEK
    <2> 2 DAYS PER WEEK
    <3> 3 DAYS PER WEEK
    <4> 4 DAYS PER WEEK
    <5> 5 DAYS PER WEEK
    <6> 6 DAYS PER WEEK
    <7> EVERYDAY
    <8> NEVER

<98> DON'T KNOW <99> REFUSED - NO ANSWER

>H3< Compared to the newspaper, would you say that television is better, about the same, or worse in providing a variety of news stories?

> <1> BETTER <2> ABOUT THE SAME <3> WORSE

<8> DON'T KNOW
<9> REFUSED - NO ANSWER

>H4< Compared to the newspaper, would you say that television is better, about the same, or worse in providing in-depth news coverage?

> <1> BETTER <2> ABOUT THE SAME <3> WORSE

- <8> DON'T KNOW <9> REFUSED - NO ANSWER
- >H5< What is your primary source for news? Would you say TV, newspaper, family members, friends, radio, or something else?
  - <1> TV <2> NEWSPAPER <3> FAMILY MEMBERS <4> FRIENDS <5> RADIO

<6> COMBINATION <97> OTHER:SPECIFY <98> DON'T KNOW <99> REFUSED - NO ANSWER

>I1< Now, I would like to ask you a few questions about some national and international news stories.

Are you aware of the flooding that has occured this summer?

<1> YES <5> NO[go to I2] <8> DO NOT KNOW-DO NOT REMEMBER <9> REFUSED [go to I2] >Ila< From what you have heard, which area, the East Coast including Florida, the Upper Mississippi River area, or the West Coast, has been most seriously damaged by the flooding?

> (IF THE RESPONDENT SAYS 'DO NOT KNOW' DO NOT PROBE, BUT RECORD 'DON'T KNOW.')

<1> EAST COAST AREA INCLUDING FLORIDA <2> UPPER MISSISSIPPI RIVER AREA <3> WEST COAST AREA <7> OTHER: SPECIFY

<8> DON'T KNOW
<9> REFUSED -NO ANSWER

- >I2< Are you aware of the war in Bosnia (formerly Yugoslavia)?
  - <1> YES <5> NO [goto I4]
  - <8> DO NOT KNOW-DO NOT REMEMBER
  - <9> REFUSED [goto I4]
- >I2a< From what you heard, is the war a result of a conflict between students and the government; a conflict among countries in Eastern Europe; or a conflict among different ethnic groups?

(IF THE RESPONDENT SAYS 'DO NOT KNOW' DO NOT PROBE, BUT RECORD 'DON'T KNOW.')

<1> THE CONFLICT BETWEEN STUDENTS AND THE GOVERNMENT <2> THE CONFLICT AMONG COUNTRIES IN EASTERN EUROPE <3> THE CONFLICT AMONG DIFFERENT ETHNIC GROUPS <7> OTHER:SPECIFY

<8> DON'T KNOW

<9> REFUSED -NO ANSWER

>I3< Are you aware of the Summit Meeting with the leaders of seven democratic countries in Tokyo last month?

<1> YES <5> NO [goto I5] <8> DO NOT KNOW-DO NOT REMEMBER <9> REFUSED [go to I5]

>I3a< From what you have heard about the Summit meeting, was the key issue between the US and Japan keeping peace in East Asia; helping Somalia; or reducing the trade surplus?

> (IF THE RESPONDENT SAYS 'DO NOT KNOW' DO NOT PROBE, BUT RECORD 'DON'T KNOW.')

<1> KEEPING PEACE IN EAST ASIA <2> HELPING SOMALIA <3> REDUCING THE TRADE SURPLUS

<7> OTHER:SPECIFY <8> DON'T KNOW <9> REFUSED -NO ANSWER

>I4< Are you aware of the issue of Gays in the Military?

<1> YES <5> NO [go to J1]

- <8> DO NOT KNOW-DO NOT REMEMBER
  <9> REFUSED [go to J1]
- >I4a< From what you have heard about this issue, will President Clinton's policy allow all Gays and Lesbians to serve in the military; they will not be allowed to serve; or that they will be allowed to serve only if they are discreet?

(IF THE RESPONDENT SAYS 'DO NOT KNOW' DO NOT PROBE, BUT RECORD 'DON'T KNOW.')

- <1> ALL GAYS AND LESBIANS CAN SERVE IN THE MILITARY
- <2> NO GAYS AND LESBIANS CANNOT SERVE IN THE MILITARY
- <3> SERVE AS LONG AS THEY ARE DISCREET
- <7> OTHER
- <8> DON'T KNOW
- <9> REFUSED -NO ANSWER

>J1< Finally, I have a few background questions that will be used for statistical purposes only.

What is your age as of your last birthday?

<18-110> YEARS

<998> DO NOT KNOW <999> REFUSED

>gen< RECORD GENDER OF RESPONDENT HERE: ASK ONLY IF IN DOUBT

> <1> MALE <5> FEMALE

>J2< How many people currently live in your household including adults and children?

<1> PERSONS [go to J4]
<2-20> PEOPLE

<98> DO NOT KNOW [go to J4] <99> REFUSED [go to J4]

>J3< Are there any children in the household (that is, individuals less than 18 years of age)?

<1> YES <5> NO [go to J4] <8> DO NOT KNOW [go to J4] <9> REFUSED -NO ANSWER [go to J4]

>J3a< How many children are in the household?

<1-25>

<98> DON'T KNOW <99> REFUSED -NO ANSWER >J4< What is the highest grade or level of education that you have completed?

<1> GRADE SCHOOL ONLY <2> DID NOT FINISH HIGH SCHOOL <3> HIGH SCHOOL GRADUATE <4> VOCATIONAL OR TECHNICAL SCHOOL <5> SOME COLLEGE <6> COLLEGE GRADUATE (BA, BS) <7> POST GRADUATE WORK <8> GRADUATE DEGREE (MA, MS,Ph.D) <97> OTHER:SPECIFY

<97> OTHER: SPECIFY
<98> DO NOT KNOW
<99> REFUSED -NO ANSWER

>J5< What is your main ethinic or racial background? Would you say you are Black (or African American), White or (Caucasion), Asian (or Pacific Islander), Native American, or Hispanic?

<97> OTHER:SPECIFY <98> DO NOT KNOW <99> REFUSED -NO ANSWER

>J6< What is your occupation?

- <1> UPPER WHITE COLLAR: Businessperson/ Professional, Self Employed
- <2> LOWER WHITE COLLAR: Sales, Managers, Clericals. Legal Aids, Clerks
- <3> UPPER BLUE COLLAR: Skilled Trades, Police, Fireman, Animal Goomer
- <4> LOWER BLUE COLLAR: Operatives Laborers, Construction
- <5> GOVERNMENTAL EMPLOYEE: State Federal Local Gov't
  employee
- <6> FARMER
- <7> HOUSEWIFE-HOUSEHUSBAND
- <8> STUDENT
- <9> UNEMPLOYED
- <10> RETIRED
- <97> OTHER: SPECIFY
- <98> DO NOT KNOW
- <99> REFUSED

>J7< To get a picture of people's financial situation, we need to know the general range of incomes of all households we interview. Now, thinking about your household's total annual income from all sources (including your job) in 1992, did your household receive \$30,000 or more in 1992? <1-12> <1> NO [go to J7h] <6> YES[go to J7d] <98> DON'T KNOW/NO OPINION <99> REFUSED/NO ANSWER >J7a< Was it \$35,000 or more? <1-12> <7> YES <6> NO OR DON'T KNOW/REFUSED >J7b< Was it \$40,000 or more? <1-12> <8> YES [go to J7c] <7> NO DON'T KNOW/REFUSED [go to J7a] >J7c< Was it \$45,000 or more? <1-12> <9> YES <8> NO OR DON'T KNOW/REFUSED >J7d< Was it \$50,000 or more? <1-12> <10> YES[goto J7f] <9> NO OR DON'T KNOW/REFUSED [go to J7b] >J7e< Was it \$55,000 or more? <1-12> <11> YES <10> NO OR DON'T KNOW/REFUSED >J7f< Was it \$60,000 or more? <1-12> <12> YES <11> NO OR DON'T KNOW/REFUSED

>J7g< Was it \$10,000 or more? <1-12> <2> YES <1> NO OR DON'T KNOW/REFUSED >J7h< [equiv J7][allow 2]Was it \$15,000 or more? <1-12> <3> YES[goto J7i] <2> NO OR DON'T KNOW/REFUSED [go to J7g] >J7i< Was it \$20,000 or more? <1-12> <4> YES[goto J7j] <3> NO OR DON'T KNOW/REFUSED >J7j< Was it \$25,000 or more? <1-12> <5> YES <4> NO OR DON'T KNOW/REFUSED

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