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THE IMPACT OF THE NOVELTY OF AND
EXPOSURE TO VCRS ON VIEWING PATTERNS

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Kyung Shin Kang

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Joseph D. Straubhaar
Major professor

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THE IMPACT OF THE NOVELTY OF AND EXPOSURE TO VCRS ON VIEWING PATTERNS

By

Kyung Shin Kang

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ABSTRACT

THE IMPACT OF THE NOVELTY OF AND EXPOSURE TO VCRS ON VIEWING PATTERNS

By

Kyung Shin Kang

This study investigated the relationships of viewing patterns with the novelty of and exposure to VCRs. Based on theoretical reasoning and findings of prior research, two hypotheses were proposed: (1) users of VCRs to whom the VCR was less novel would watch videotapes more individually than those to whom the VCR was more novel and (2) heavier VCR users would watch videotapes more individually than lighter VCR users.

In order to test these hypotheses, the novelty was measured by the length of VCR ownership and the perception of novelty about VCRs. The exposure to VCRs (i.e., heavier or lighter users) was measured by the amount of viewing and recording time. The individual viewing patterns were measured by the number of general persons and family members watching videotapes together.

The results partially supported the research hypotheses. Specifically, as is expected, the perception of novelty was positively associated with the number of family members watching videotapes together. The length of VCR ownership was negatively associated with the number of

family members watching videotapes together. The relationships between individual viewing patterns and the amount of viewing and recording time, however, turned out to be opposite against the prediction. In other words, the amount of viewing and recording time was positively correlated with the number of general persons and family members watching videotapes together. Finally, the implications related to the findings were suggested.

Dedicated to my parents

and husband, Kil Ho

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Chapter One

INTRODUCTION

The home videocassette recorder (VCR) has been available to U.S. consumers since 1975 when it was introduced into the United States by the Sony corporation. Unlike other new communication technologies that have yet to live up to the hype of the early 1980s (e.g., videotex, teletext, direct broadcast satellites, pay-per-view, and interactive cable television), the diffusion of VCRs in the United States occurred more rapidly than what was predicted in the late 1970s (Klopfenstein, 1989; 1985).

Reports by Arbitron Research showed that by the end of 1989 seven out of ten U.S. households owned a VCR, an 11% increase from 1988. That meant that some 63,170,000 households owned at least one video cassette recorder. By May of 1990 VCR penetration had reached 70.3% of all U.S. households, and was expected to reach 90% by the middle of the decade (International Television and Video Almanac, 1991). In urban areas, both Arbitron and Nielson figures indicated the VCR penetration was higher than the overall national averages. Color television remained the only consumer electronics technology with a U.S. household penetration higher than that of the VCR; even black-and-white television penetration (58%) is now lower than VCR penetration (Electronic Industries Association, January

1989).

The widespread diffusion of VCRs has led mass communication researchers to do research on VCR as a new research site. The studies on VCRs can be largely divided into two tendencies. First, some students of VCRs have attempted to describe current phenomena of VCRs. Generally, this descriptive research has focused on how VCRs are diffused, who adopted (for example, Klopfenstein, 1987, 1988; Straubhaar and Lin, 1989; Scherer, 1989), and how people use VCRs in terms of frequency, type, and origins of programs recorded, replayed, rented or bought (for example, Levy, 1980a, 1980b, 1981, 1983; Greenberg and Heeter, 1987; Buch, 1984). Although these descriptive studies are useful in understanding the basic facts about VCRs, they have some limitations in their lack of theoretical explanations about VCRs. Second, some students of VCRs have attempted to explain the phenomena on VCRs in order to overcome the weaknesses of prior research. For example, some students have examined the impacts of VCR on the other mass media and audiences, or social effects of VCRs (for example, Hughes and Dobrow, 1988; Kim et al., 1988; Harvey and Rothe, 1986; Gunter and Levy, 1987; Lachenbruch, 1984), and some have applied uses and gratifications concepts to the VCR area in order to define underlying motivations and cognitive-affective outcomes (for example, Cohen, Levy and Golden, 1988; Levy, 1987a; Rubin and Bantz, 1987, 1988). Since these studies attempt to focus on why VCRs have various effects, they deserve much attention in a sense that they provide some theoretical explanation on the impact of VCRs.

Although facts about the VCR phenomena have been accumulating through various studies, there are some controversies on whether people use VCRs individually or collectively. Some researchers argue that people use VCRs collectively. For example, Rubin and Bantz (1987) found that VCRs provide active interpersonal and mass communication links. Specifically, the scheduling of a television program can be shifted to not only a more convenient time, but a time when other members of the family also can watch by the time-shifting function of VCR. Kim, Baran and Massey (1988) found that a majority of both parents and children reported that they decide which tapes to rent in a somewhat democratic manner and watch the VCR together. Harvey and Rothe (1986) also observed that the VCR consumers who had owned their VCR for more than 12 months and less than 24 months increased entertainment at home and time spent with family. Schoenbach and Hackforth (1987) compared to people in households without a VCR but otherwise similar, with members of households with a VCR in West Germany and found that VCR households spend more time at home and with family. In contrast, there are some research findings that people use VCRs individually. For example, Gunter and Levy (1987), in a British study of adults, concluded that VCR use is primarily a privatized experience. Baboulin, Gaudin and Mallein (1983) argued that although VCRs promise to enhance family harmony, they may actually intensify conflicts over program selection and then lead to or encourage an increased privatization of leisure activities. Thus, the findings on how people use VCRs are not yet conclusive.

Two plausible explanations for these controversial findings are that the novelty of VCRs and the amount of exposure to VCRs (the amount of VCR use) served as confounding factors in these studies. Actually, earlier studies found that people watched VCRs collectively, whereas recent studies revealed individual viewing. There are two possibilities in explaining the differences in the pattern of VCR viewing between earlier and recent studies. First, the novelty of VCRs might result in the differences in the pattern of viewing. VCRs have more novelty in the period of earlier studies than recent studies, since VCRs started to be introduced to the audience at the period of earlier studies. The novelty of VCRs at earlier periods was likely to make people to gather in order to watch videotapes. The other possibility might be related to the amount of exposure to VCRs. Naturally, people was less exposed to VCRs at the earlier periods than in recent periods. Since people had less chance to be exposed to VCRs at the earlier periods, owners of VCRs might invite their friends or relatives to watch videotapes. To summarize, the controversial findings on whether people use VCRs collectively or individually seem to be two confounding factors: that is, the novelty or newness of VCRs and the amount of exposure to VCRs (the amount of VCR use).

The purpose of this study is to investigate the relationships between the novelty of VCRs and the pattern of viewing, i.e., the degree to which people use VCRs collectively. In addition, this study aims at examining the relationships between the exposure to VCRs and the pattern of viewing. Since there is little research exploring the relationship between the novelty of mass media and changes in viewing pattern, and the amount of exposure to mass media and changes in viewing pattern, the present study could provide interesting evidence in this area. In order to achieve this purpose, first, the relationships between the novelty of VCRs and the pattern of viewing will be predicted by reviewing the prior findings about the relationships between the novelty of other mass media and the pattern of viewing. Then, the relationships between the amount of exposure to VCRs and the pattern of viewing will be addressed.

Chapter Two

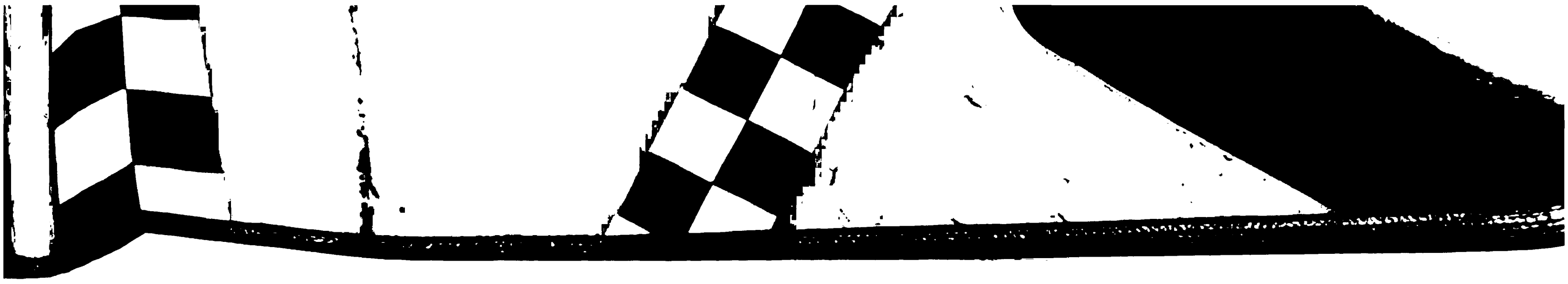
LITERATURE REVIEW

In this chapter, the literature on the relationships between the novelty of other mass media and the pattern of viewing will be reviewed. Based on these prior literature, the prediction on the relationships between the novelty of VCRs and the pattern of viewing will be made. In the following section, the literature related to the characteristics of VCR users will be reviewed in order to propose the proposition on the relationships between the exposure to VCRs and the pattern of viewing.

The Novelty of VCRs and the Pattern of Viewing

Generally, novelty refers to the degree to which audience shows concern or enthusiasm about a new communication technology (Rogers, 1985). Since the novelty is a curiosity of mass media, users or owners of mass media have a maximum novelty at the initial time when they buy the mass media. Naturally, the novelty gradually declines as the users or owners continue to use the mass media.

Prior research revealed that the less the novelty, the more individually users watch programs of mass media. According to Bogart (1956) who reviewed the research on television' impact on American social life, the longer the period of possessing TV, the more individually users or



owners of TV watch programs. Specifically, Bogart proposed four main stages of TV use. The early, tavern stage has television as a public spectacle, often in bars or other public places, with little private ownership. At that time, TV was viewed by the whole community members. The next, pioneer stage represents the start of television's domestication, with sets still an expensive novelty, but which increased a family's status and resulted in increased social activity through other people's visits to television-owning families specifically for the sake of viewing. TV was viewed collectively by whole family members and their friends. In the mature stage, television becomes more taken for granted, usually viewed only by the family itself and was a focal point of the family's typical evening activities. In the forth stage of development, TV use become less social and more individualistic as the rate of TV penetration nearly reached saturation level and the number of family with multiple sets has increased. To sum up, as the stages developed (i.e., the period of possessing TV was longer), TV viewing becomes more and more individualized. Further, given that the period of possessing TV is directly related to the novelty, his findings imply that as the novelty declines, so people watch TV individually.

Recently, Kottak (1990) reported results similar to Bogart's findings. According to Kottak, people tend to

watch TV together at the initial period of possessing TV, since they are very curious and enthusiastic about TV. Put differently, since TV has a novelty at the earlier time of adopting TV, the owners of TV tend to invite their relatives and/or friends and enjoy watching TV as a medium, not the message transferred by TV. As the novelty of TV declines and people get accustomed to TV, however, TV viewing becomes gradually family oriented and finally individualized. In the final phase of development of TV usage, for instance, TV is becoming more like our other media. The movies, radio, and magazines all gear their topics, formats, and subjects more toward particular homogenous segments of the population than toward a mass audience so that encourage the individualized consumption. To summarize, as the stages of TV use develop (i.e., as the novelty of TV declines), people view TV more and more individually.

One of indirect evidences which support that the novelty of VCR is related to individual watching can be drawn from the comparison in the findings of viewing patterns between studies conducted at the period or areas in which a few people adopted VCRs and those examined at the period or areas in which many people possessed VCRs. Some studies (Harvey and Rothe, 1985; Roe, 1987; Schoenbach and Hackforth, 1987), which were conducted at the period or areas in which the penetration rate was low and the novelty of VCRs is expected to be high, revealed that the VCR was

used collectively (i.e., with whole family members and friends). For example, Schoenbach and Hackforth (1987), who observed various activities relate to the use of VCRs in West Germany where 20 percent of households possessed VCRs, reported that VCR households usually shared watching videotapes with whole family members and friends. In contrast, other studies (Gunter and Levy, 1987, 1988; Gunter and Wober, 1989; Lindolf and Shatzer, 1989; Lin and Atkin, 1989; Gray, 1987) examined at the period or areas in which the penetration rate was high found that people tended to watch VCRs individually. Lindolf and Shatzer (1989) investigated the differences in spousal perceptions of VCRs between husbands and wives in the United States where 60 percentages of households had VCRs at that time and the novelty of VCRs is expected to be low. According to them, people usually watched videotapes alone. In sum, the results of these studies indicated that the penetration rate of VCR was closely associated with individual or collective viewing of VCR. Specifically, when the penetration rate of VCR was low, people shared watching videotapes with other people. When the penetration rate of VCR was high, people watched videotapes individually (i.e., alone or only two). Further, given that the penetration rate is negatively correlated with the novelty of VCRs, these findings imply that the novelty of VCRs is negatively correlated with individual viewing.

Similarly, the same tendency appeared in TV and radio, which strongly supports that the penetration rate of mass media closely related to the novelty affects in the viewing pattern. Earlier studies (for example, Maccoby, 1951; Hamilton and Lawless, 1956; Himmelweit et al, 1958) tended to find that television viewing was one of the activities in which all family members participated together, whereas recent studies(for example, Webster, 1989) revealed that there was a decreasing probability that a TV program was viewed by two people on a given time. People did not watch TV together. These findings supports the prediction on the relationship between the novelty of mass media and the pattern of viewing. That is to say, in the period of the earlier studies (1950s) discussed above, people might have relatively higher novelty about TV since TV started to be diffused in the 1940s and the penetration rate of TV was less than 10 percent of U.S. households (Klopfenstein, 1989). Thus the novelty of TV made people watch together. On the other hand, in the period of recent studies, it is hard to expect that TV has a novelty since TV has been in the households for a long time and the penetration rate of TV was over 95 percent of U.S. households, so that people watch TV individually. In short, television viewing has been gradually individualized as the penetration rate has increased and the novelty of television has decreased.

For radio, it was a medium that made family members

gathered when first introduced, and yet it is now an extremely privatized medium. During the 1930s and 1940s when people began adopting radio and had the novelty about radio, radio was placed at living room and had successfully captured the attentions of the American family during the major evening hours (DeFleur and Ball-Rokeach, 1979). But, radio's role is now to provide background music and news while individuals are driving, working, studying, otherwise occupied in individual activities (Rogers, 1985). Radio is now consumed mostly individually. That is, audience's usage of radio has been changed from collectively to individually as the novelty of radio has declined. To sum up, the prior findings suggest that as the novelty of TV and radio had declined, so people watched TV or listened radio individually. Accordingly, these findings indirectly supported the prediction of this study that the novelty of VCRs is correlated with the users' pattern of viewing.

In this section, the literature on the relationship between the novelty of TV and the viewing pattern, the comparisons in the viewing pattern of VCR, TV and radio between earlier and recent studies have been reviewed. The findings from these prior studies indirectly evidenced that the novelty of VCRs would affect the viewing pattern of VCR. Based on the above rationale and prior findings, the following hypothesis is proposed.

H1: Users of VCRs to whom the VCR is less novel will watch videotapes more individually than those to

whom the VCR is more novel.

The Exposure to VCRs and the Pattern of Viewing

Generally, the exposure to VCRs refers to the amount of time in which an individual uses the VCR (for playing and for recording). This definition has two implications. First, an individual can vary his/her amount of using the VCR day by day. For example, a person might spend watching videotapes one hour during a given day, three hours during the following days, and so forth. That is the same case with recording. Thus, the exposure to VCRs usually represent the average of the amount of using VCR. Second, individuals differ in the amount of watching videotapes. That is, a person might watch two hours a day, while another person watches two hours a week. Since individuals are different in spending time with each other, they can be compared with regards to the amount of using VCR, specifically average amount of using VCR.

Regarding the relationship between the exposure to VCRs and the pattern of viewing, the increase in the exposure to VCRs is expected to lead to an increased tendency toward individual watching. Although there is no direct evidence on this prediction, prior findings from the literature on the general characteristics of VCR audience support this proposition. In this section, the prior findings about the general characteristics of VCR audience will be reviewed. The rationale of the prediction that the more current amount

of exposure to VCRs, the more individually an audience will watch videotapes will be clarified through these prior findings.

The amount of exposure to VCRs seems to be closely related to the tendency of individual watching due to the general characteristics of VCR audience. Generally, the VCR audience is more active in choosing and preferring programs than those of any other media (for example, Levy, 1980b; Levy and Fink, 1984; Rubin and Bantz, 1987). That is partially due to technological peculiarities of VCRs. VCRs do not automatically offer programs to their audience, whereas other media such as TV send programs which their audience cannot choose. In this sense, the VCR audience is assumed to more desire and intend to spend watching videotapes than those of other media (Levy, 1983, 1981; Levy and Fink, 1984; Harvey and Rothe, 1986; Donohue and Henke, 1988; Levy and Gunter, 1988). As a matter of fact, the VCR audience tends to be more selective and more involved in watching videotapes (Levy, 1987a; Williams, Phillips and Lum, 1985), while TV audience is more passive in watching TV or does another task during turning on TV (Morley, 1986; Collett, 1986). Given this general characteristic of the VCR audience, it is not difficult to imagine that those who are heavily and actively exposed to VCRs have a more precise preference of videotapes than those who are lightly exposed to VCRs. Further, those who have a clear preference of

videotapes are expected to watch videotapes more individually, since they might really want to enjoy watching the videotapes chosen without being interrupted by others and the videotapes chosen might have lower chance to match other person's preference.

Since research on VCRs has focused on VCR phenomena at the descriptive levels (e.g., how much the VCR is used), there are no direct evidences from prior findings for the predictions on the relationship between the amount of exposure to VCRs and individual viewing pattern made above. Prior research on VCRs only provides some evidences that VCR audience is active in choosing and preferring programs. For example, Levy and his associates (Levy, 1983, 1981; Levy and Fink, 1984; Donohue and Henke, 1988; Harvey and Rothe, 1986; Levy and Gunter, 1988; Rubin and Bantz, 1987) revealed that the peculiar characteristics of the VCR technology made the users more active by using VCRs as a device (1) to record television programs for later, more convenient replay (time-shifting), (2) to build a home library of previously broadcast programs and prerecorded tapes, and (3) to play rented or purchased tapes of movies, rock videos, etc. To sum up, Levy and his associates' studies indicated that VCR audience actively chose and preferred specific TV programs or videotapes.

Further, some studies (Levy, 1980b; Levy and Fink, 1984; Rubin and Bantz, 1987) showed that VCR users were active by showing high consistency between the choice and preference of programs. For example, Levy (1980b) found that VCR users exhibited strong consistency between preferences and what they recorded and playback. Rubin and Bantz (1987) also found clearer patterns of preference in what VCR users rent and record. In short, VCR users record, rent and playback what they want to watch.

Finally, Greenberg and Lin (1989) also found that VCR users were more active in watching TV than non-VCR users. They examined the differences in TV viewing behaviors between VCR users and non-VCR users. According to them, during watching TV, VCR users were more active by zapping commercials and switching channels more frequently than non-VCR users. These findings have two implications regarding the rationale for the proposition made in this study. First, these findings might implicate that VCR users are more likely than non-VCR users to have preferences for certain types of programs. Put differently, while TV broadcasts programs that VCR users do not prefer, they switch channels more frequently in order to search for their preferring programs from other channel. Second, VCR users are more likely than non-VCR users to have a desire not to be interrupted by other distractive factors such as commercials during watching programs. If this is the case, VCR users are expected to watch programs more individually than non-VCR users in order to watch their preferring

programs and reduce distractive factors. Further, given that those who are heavily exposed to VCRs might be more active than those who are lightly exposed to VCRs, users with heavy exposure to VCRs are assumed to watch programs more individually than users with light exposure to VCRs.

To summarize, prior findings indicate that VCR users are active in choosing and preferring a certain type of programs. They also show high consistency between the choice and preference of programs. Further, they are more involved in watching programs. These tendencies might lead VCR users to watch videotapes individually, since they might want to enjoy videotapes strongly without being disturbed by other distractive factors. Given that those who are heavily exposed to VCRs are more active than those who are lightly exposed to VCRs, the former is expected to watch videotapes more individually than the latter. Based on these rationale and prior findings, the following hypothesis is proposed.

> H2: Heavier VCR users will watch videotapes more individually than lighter VCR users.

Chapter Three

RESEARCH METHODS

As argued in the prior chapter, the two main hypotheses on the relationship of the viewing pattern with the novelty of and exposure to VCRs were established. Overall, a survey method was employed in this study in order to test these hypotheses. In this chapter, the survey method employed in this study will be discussed. Specifically, the research participants and procedure of collecting data will be addressed. Then, the measures of the novelty of VCRs, exposure to VCRs, and viewing pattern will be explicated.

Research Participants

About 217 high school students were used as the research participants for this study. These research participants were recruited from two high schools in suburbs of Lansing area. Nine research participants who did not complete the questionnaire and ten research participants who did not have a VCR were eliminated. Accordingly, the final sample size in this study was 198 research participants. Out of 198 research participants, 42.9% (85 research participants) were males and 57.1% (113) were females. Their age ranged from 14 to 21, with concentration on 15 (12.6%), 16 (21.2%), 17 (45.5%), and 18 (17.7%).

Data Collection Procedure

In order to collect data, a survey method was used in this study. For the survey, a questionnaire was developed. First, this questionnaire specified the purpose of this study and manner of responding to questions. Then, questions of whether the research participants have VCRs in their home and whether they have their own VCR in their private room were included. The measures of the novelty of VCRs, exposure to VCRs, and viewing pattern also were included in this questionnaire. Finally, this questionnaire contained demographic and socio-cultural questions.

The questionnaire was administered on a class-wide basis. After the questionnaire was distributed to the research participants, the researcher introduced herself briefly. Then, the basic instructions were given to the research participants. These instructions contained the purpose of this study and the correct manner for completing the questionnaire. After the instructions were finished, the research participants were asked to complete the questionnaire.

However, the questionnaire was constructed so that some research participants who had no VCR at their home responded to the part of the questionnaire. Since this study was to investigate the use of VCR, especially the viewing pattern of VCR with families, it was important that research participants had VCRs at their home. In the questionnaire, the research participants were asked to respond to whether they have VCR at their home as the first question. If they had no VCR at home, they were instructed to skip those questions regarding the measures of novelty, exposure to VCRs, and viewing pattern of VCR and to answer basic demographic and socio-cultural questions. As a matter of fact, those research participants who reported that they did not have a VCR at their home (ten participants) were excluded in statistical analyses. It had taken about 15 to 20 minutes for those who had VCR at their home to finish responding the questionnaire. In the following section, specific questions which measure independent, dependent, and control variables will be explicated.

Independent Variables

There were two independent variables in this study: the novelty of VCRs and exposure to VCRs. In the following section, the measures of these two independent variables will be explained.

The Novelty of VCRs.

The novelty of VCRs is conceptually defined as the degree to which VCR users show concern or enthusiasm about VCRs. In this study, two measures of the novelty of VCRs were devised: that is, perceptual and behavioral measures. The reason for employing these two measures was that the range of the novelty across the research participants could be restricted

in behavioral measure. Since VCRs have been diffused rapidly for a short period, the research participants might be similar in the behavioral measure usually measured by the length of the period of possessing VCRs, but dissimilar in the perceptual measure usually measured by the degree to which VCR users perceive the novelty. Accordingly, in this study, both behavioral and perceptual measures were employed.

For the behavioral measure, the length of ownership was measured by asking how long the research participants (or their families) have possessed VCRs (see Appendix). Seven response categories were provided for this question: (1) less than 6 months, (2) 6 months to one year, (3) one to two years, (4) two to three years, (5) three to four years, (6) four to five years, and (7) more than five years. For the perceptual measures, the following seven items of Likert-type, five-point scales were developed.

1. VCRs are new to me.
2. Sometimes I watch videotapes because I am eager to use a VCR.
3. I am curious about using a VCR.
4. I think a VCR is a fascinating tool for entertainment.
5. Sometimes I play or record programs because I am interested in how a VCR works.
6. I think watching a video is one of exciting activities.
7. I am enthusiastic about using a VCR.

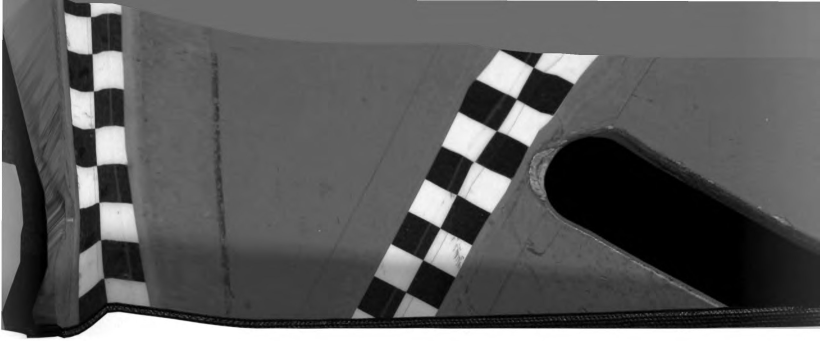
For checking the reliability of these items, Cohen's alpha was calculated. The result indicated that these items were reliable (alpha = .71).

The Exposure to VCRs. The exposure to VCRs conceptually represents the degree to which VCR owners spend in using VCRs. In order to measure this construct, the research participants were asked to indicate how much (many hours) they spend in using VCRs with regard to playing and recording. The same question was asked for weekdays and weekends, separately. These responses for weekdays and weekends were averaged on a daily basis for the index of the exposure to VCRs. Each of the items is reported on a predetermined ratio scale ranging from "zero to nine-and-more" hours. The specific questions for the exposure to VCR include following;

1. How many hours do you usually watch videos (including rented and bought videos) at home from Monday through Friday?
2. How many hours do you usually watch videos (including rented and bought videos) at home on Saturday and Sunday?
3. How many hours do you usually watch videos (including rented and bought videos) at a friend's home during a typical week (from Monday to Sunday)?
4. How many hours do you watch videos taped earlier at home during a typical week (from Monday to Sunday)?
5. How many hours do you watch videos taped earlier at a friend's home during a typical week (from Monday to Sunday)?
6. How many hours do you usually tape programs from TV during a typical week (from Monday to Sunday)?

Dependent Variable: the Viewing Pattern

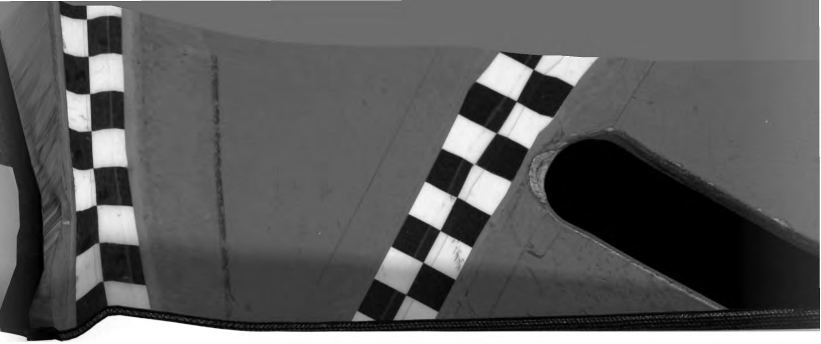
Here, the viewing pattern is conceptually defined as the degree to which an individual watch videotapes individually. This definition implies that the individual viewing of VCR can be measured on the continuum of



individual viewing-collective viewing in terms of the number of persons with whom an individual watches videotapes on a usual basis. For example, an individual might watch videotapes alone, with a family member, or with two other friends, and so forth. In other words, individual watching can be measured on the continuum of the number of persons with whom an individual watches videotapes.

Following the above reasoning, the viewing pattern was measured by the number of persons with whom users watch VCRs together in average. Additionally, when they watch videotapes at home, the number of persons they usually watch together was asked. This question seemed to be necessary since the research participants were high school students, they might watch videotapes with friends regardless of their perception of novelty of VCR or the length of VCR ownership. Therefore, the effects of the novelty of VCRs and the exposure to VCRs might be better come out in their viewing pattern at home. The specific questions are described below.

1. With how many people do you usually watch video tapes? (The response categories are (1) I usually watch videos alone, (2) I usually watch videos with one person, and (3) I usually watch videos with two or more than two persons)
2. At your home, how many people do you usually watch videos together? (The response categories are (1) I usually watch videos alone at home, (2) I usually watch videos with one person at home, and (3) I usually watch videos with two or more than two persons at home.)



Control Variables: Demographic Attributes

There was a main control variable in this study: the possession of research participants' own VCR in their private room. Since this study focuses on the viewing pattern of VCR, especially the degree to which research participants watch videotapes collectively, the possession of their own VCR only for their own use might influence the effect on collective viewing. In order to control the effect of the possession of their own VCR on collective viewing, the possession of their own VCR was measured by asking the question of whether the research participants possess their own VCR. Then, this variable was employed as a control variable in this study.

Although they were not directly related to the control variables for this study, basic demographic and socio-cultural variables were measured. As indicated above, these variables might serve as a factor to enhance the external validity in the future. Specifically, age, gender, family composition, and socioeconomic status (SES) were measured. Family composition was assessed with the size of family and the parental structure, i.e., an original mother and father, mother only, mother plus stepfather, etc. SES was assessed by determining the number of cars and bedrooms at the research participants' address, the ownership of their residence, the possession of their own bedroom, and their parents' level of education and employment.

Chapter Four

RESULTS

Methods for testing the effect of the novelty and the exposure to VCRs on the viewing pattern of VCR were addressed in the previous chapter. In this chapter, statistical methods for testing these hypotheses proposed in this study and the results will be described. Prior to describing the statistical methods and results for the hypotheses, basic descriptive information about data will be summarized.

Descriptive Data

Of the sample (N= 208), 95.2% (n= 198) had at least one VCR at their home, while 4.8% (n= 10) had no VCR. Among the respondents who had a VCR or VCRs at their home, 42.9% were males and 57.1% were females, with age ranging from 14 to 21 years old. Further, a half of them lived with their original parents. Most of them lived in their houses in which they had their own room. Specifically, about 48% of respondents with a VCR or VCRs lived with their original parents and they had on the average four household members. Approximately 92% of them lived in houses with 71.7% resident ownership; 90.9% of respondents with at least one VCR had their own room. The average number of bedrooms and cars each household with VCR(s) owned was around 3.3 and 2.7

respectively.

The employment, occupational, and educational status of the parents of research participants presented a middle-scale populations. The results of employment indicated that most respondents' parents who had a VCR or VCRs at their home were employed. Specifically, 76.8 %, 5.5 %, and 5.5 % out of their parents were full-time, half-time, and not employed, respectively (4 cases were missing). The respondents' parents' occupations seemed to be evenly distributed in terms of professionalism and job types. The results of their parents' occupation indicated that 29.8 %, 22.7 %, 16.7 %, 12.6 %, and 7.6 % out of all respondents' parents turned out to be skilled workers, clerical employees, service workers, professional experts, and self-employed workers, respectively (10.6 % out of respondents did not responded to their parents' occupation). Overall, the educational levels of the respondents' parents seemed to be relatively moderate. Only 18.6 % out of their parents had at least a four-year college degree, within which 11.6% had a college degree, 4.0% had at least some graduate work, and 4.0% had a graduate degree. Of the remaining 78.3% of the parents, 12.1% had some four-year-college schooling, 15.7% had a community college degree, 18.7% had some community college experience, 29.3% had a high school degree, and 2.5% had some high school experience (6 cases are missing). In sum, the results of employment,

occupation, and education level indicated that the respondents' parents were middle in social economic status.

Further, the results indicated that there were no significant differences in all the demographic and SES-related variables between the respondents who did not had a VCR at their home and those who had at least one VCR at their home (all the variables were nonsignificant). The specific comparisons appear in Table 1.

The proportion of possession of VCR and distribution of the number of VCRs in the whole sample suggested that people who reside in urban area might have more VCRs than people who live in rural areas. As addressed above, most research participants (about 95%) possessed a VCR or VCRs at their home. Specifically, among the respondents who had at least one VCR at their home, 53.5 % out of them had one VCR, while 46.5 % had two or more than two VCRs. Given that the overall national average of possession of VCR is 70.3 % of all U.S. households, the percentage of this possession is considered to be very high. The descriptive statistics also indicated that the households of research participants had owned VCRs for moderate periods. They, on the average, have owned VCRs for three to four years. The results also showed that the length of VCR ownership was evenly distributed. Specifically, 23.7% reported they have owned VCR(s) more than five years, 17.2% four to five years, 23.7% three to four years, 16.7% two to three years, 13.6% one to two

Table 1

Demographic Comparisons by VCR Access

Demography	VCR (N's = 198)	No VCR (N's = 10)
a. Gender: % female	57.1%	60.0%
b. Age range	14-21	16-18
c. Size of family	4.2	4.8
d. Parent Structure		
Mother and father	48.0%	90.0%
Father and stepmother	2.5%	
Father only	3.0%	
Mother and stepfather	18.7%	
Mother only	22.7%	10.0%
Other adults	5.1%	
e. SES		
# of cars	2.7	2.2
# of bedrooms	3.3	3.7
Own their home	71.7%	80.0%
Have own room	90.9%	90.0%
f. Parents' employment: % full time	76.8%	80.0%
g. Parents' education		
High school experience or degree	31.8%	60.0%
Community college experience or degree	34.4%	
Four-year college experience	12.1%	
Four-year college degree	11.6%	20.0%
Some graduate work	4.0%	10.0%
Graduate degree	4.0%	
h. Parents' type of work		
Skilled workers	29.8%	40.0%
Clerical employees	22.7%	20.0%
Service workers	16.7%	20.0%
Professional workers	12.6%	
Self-employed	7.6%	

years, and 18.7% less than one year. In sum, the results indicated that most respondents had a VCR or VCRs during moderate time of period. These results appear in Table 2.

On the other hand, the research participants tended to spend a lot of time in watching videotapes (See Table 3). They watched videotapes (included rented, purchased and taped videos) 1.73 hours a day and recorded 2.37 hours a week on the average. When these results are compared to the findings of teen use of VCRs in Sweden (Roe and Johnsson-Smaragdi, 1987), American high school students, especially the respondents in this study seems to spend more time (0.7 hours a day) in watching videotapes now than the Swedish adolescents in 1987.

Research Hypotheses

Regression analyses were performed to test the hypotheses of this study. Since viewing patterns which are dependent variables in this study were measured by the number of general persons and family members only with whom the respondents usually watched videotapes together, the number of general persons and the number of family members were employed as dependent variables in the regression analyses, separately. Further, the possession of the respondents' own VCR was used as a control variable, since this variable was expected to directly influence the viewing patterns. Thus, the possession of the respondents' own VCR s

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Table 2

The VCR Environment of the Sample (N's = 198)

Variable	Percentage
1. VCR Ownership	
One	53.5 (106)
Two	36.4 (72)
Three	7.1 (14)
Four and more	3.0 (6)
2. Possession of Own VCR	
Yes	17.2 (34)
No	82.8 (164)
3. Length of VCR Ownership	
Less than one year	5.1 (10)
One to two years	13.6 (27)
Two to three years	16.7 (33)
Three to four years	23.7 (47)
Four to five years	17.2 (34)
More than five years	23.7 (47)

Note. About 95% of the research participants in this study (who came from families with children) turned out to have a VCR(s). This percentage is higher than national penetration rate of VCR (about 70%). However, it seems not to be significantly higher than the penetration rate of VCR among families with children (about 84%).

Table 3

Means and Standard Deviations of the Amount of Viewing and Recording Time

	Viewing time	Recording time
Mean	1.73	2.37
SD	.94	2.44
SD/Mean	.54	1.03

Note. N's = 198. Viewing time was computed by dividing the sum of the videotapes (rented, purchased and recorded) - viewing hours across weekdays, Saturday and Sunday at home as well as a friends' home by a constant of seven. Recording time was measured by overall recording hours during a typical week.

served as a covariate in all the regression analyses. Specifically, to test hypothesis one, the number of general persons and the number of family members with whom the research participants watched videotapes together were regressed on the perception of novelty and length of VCR ownership with the possession of the respondents' own VCR as a covariate. To test hypothesis two, these two dependent variables also were regressed on the amount of viewing time and recording time with the possession of the respondents' own VCR as a covariate.

Further, ANOVAs were performed in order to identify the effect of various levels of the perception of novelty, the length of VCR ownership, the amount of viewing time, and the amount of recording time on the viewing patterns. For ANOVAs, the perception of novelty and the length of VCR ownership were split into three levels (high, moderate and low). The three levels of the perception of novelty and length of VCR ownership seem to be reasonable, since the novelty was assumed to be rapidly diminished in relatively short period of time. In other words, moderate and high levels of the perception of novelty and length of VCR ownership might not differ in the effect on the viewing patterns (i.e., dependent variables), since the difference in the degree of novelty between these two levels might be not large enough. The cutting points were determined so that the number of the respondents could be evenly

distributed to each level. Specifically, 3.30 and 3.87 were employed for the perception of novelty which had five-point Likert-type scale as a cutting point, whereas three and four years were used for the length of VCR ownership as a cutting point, respectively. In other words, for the novelty, below 3.30, between 3.30 and 3.87, and above 3.87 became the low, moderate, and high groups, respectively. For the length of VCR ownership, those who possessed a VCR(s) below three, between three and four, and above four years were regarded as low, moderate, and high groups, respectivley. On the other hand, the amount of viewing time and recording time were split into two levels (higher and lower) for two reasons. First, these variables were highly distributed within narrow ranges. Further, these variables were usually median-split. Accordingly, two levels were employed for these two variables. The cutting points for the amount of viewing time and recording time were 1.57 hours and 2.0 hours, respectively. That is, for the amount of viewing time, those who watched a VCR(s) below and above 1.57 hours per day were regarded as low and high groups, respectively. For the amount of recording time, those who recorded videotapes below and above 2.0 hours per week were considered as low and high groups. Finally, when the results of ANOVAs indicated that specific levels of variables had a certain effect on the viewing patterns, t-tests were performed as a subsidiary test in order to

compare the differences in the viewing patterns among levels. The possession of the respondent's own VCR also was used as a covariate in all these analyses.

Hypothesis one. The first hypothesis predicted that users of VCRs to whom the VCR was less novel would watch videotapes more individually than those to whom the VCR was more novel. The results partially supported this hypothesis. As is evident in Table 4, the length of VCR ownership (i.e., the behavioral measure of the novelty) and perception of novelty were associated with the number of family members who watched videotapes together. The length of VCR ownership related negatively to the number of family members watching videotapes together ($B = -.16$, $p < .05$), and the perception of novelty positively related to the number of family members watching VCRs together with marginal significance ($B = .13$, $p < .06$). Put differently, the longer the respondents had VCRs at their home, the more individually they tended to watch videotapes. Similarly, those who perceived less novelty about VCRs tended to watch VCRs more individually than those who perceived high novelty about VCRs. Further, these results of regression analysis indicated that the length of VCR ownership was a slightly better predictor of the number of family members who watched videotapes together than the perception of novelty. These two variables, however, were not associated with the number of general persons who watched videotapes together (Bs = -

Table 4

Multiple Regression of the Number of Family Members Watching Videotapes Together on the Perception of Novelty and the Length of VCR Ownership Controlling for the Possession of Own VCR

Variable	Family Members Watching Together		
	Beta	MR	R^2
Step 1			
Possession of own VCR	.18*	.18*	.02
Step 2			
Perception of novelty	.13**	.26**	.07
Length of ownership	-.16*		

Note. * = $p < .05$ and ** = $p < .06$ for Betas.

* = $p < .05$ and ** = $p < .01$ for MRs.

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.08 and .09 for the length of ownership and perception of novelty, respectively. Both were statistically not significant at the level of .05). These results of regression analyses appeared in Table 5 indicated that the length of VCR ownership and perception of novelty were good predictors of the number of family members, not the number of general persons who watched videotapes together. As a result, these results partially supported and clarified the hypothesis one.

Further, as is indicated above, ANOVAs were performed to identify the effect of levels of the length of VCR ownership and perception of novelty on the number of family members who watched videotapes together. The results of ANOVA appear in Table 6. As is expected from the regression analyses, the main effects for both the length of VCR ownership and perception of novelty were found. The length of VCR ownership influenced the number of family members watching videotapes together with marginal significance ($\underline{F}$ [1, 195] = 2.59, $\underline{p} < .08$). The perception of novelty also had marginally significant effect on the number of family members watching videotapes together ($\underline{F}$ [1, 195] = 2.67, $\underline{p} < .07$).

In order to identify the differences in the number of family members watching videotapes together among levels of the length of VCR ownership and perception of novelty, t-tests were conducted. The results of t-tests indicated that

Table 5

Multiple Regression of the Number of General Persons Watching Videotapes Together on the Perception of Novelty and the Length of VCR Ownership Controlling for the Possession of Own VCR

Variable	General Persons Watching Together		
	Beta	MR	R^2
Step 1			
Possession of own VCR	.14*	.14*	.02
Step 2			
Perception of novelty	.09	.18	.03
Length of ownership	-.08		

Note. * = $p < .05$ for Betas.

* = $p < .05$ for MRs.

Table 6

ANOVA for the Number of Family Members Watching Videotapes Together on the Perception of Novelty and the Length of VCR Ownership Controlling for the Possession of Own VCR

Source of Variation	SS	DF	MS	F	P
Possession of own VCR	2.13	1	2.13	5.12	.03
Length of VCR ownership	2.15	2	1.08	2.59	.08
Perception of novelty	2.22	2	1.11	2.67	.07
Length of VCR ownership x Perception of novelty	1.46	4	.36	.88	ns

Means of Family Members Watching Videotapes Together by the Perception of Novelty and the Length of VCR Ownership

Length	Novelty		
	Low (below 3.30)	Mod (3.30-3.87)	High (above 3.87)
Low (below 3.0)	2.64	2.43	2.65
Mod (3.0-4.0)	2.53	2.19	2.33
High (above 4.0)	2.48	2.26	2.12

Note. *N*'s for groups range from 12 to 29.

those with low length of ownership watched videotapes with larger number of family members than those with high length of ownership (t = 2.40, df = 149, p < .05) and moderate length of ownership with marginal significance (t = 1.80, df =115, p < .07). There, however, was no significant difference in the number of family members watching together between those with moderate and high length of VCR ownership. Similarly, those with high perception of novelty watched videotapes with larger number of family members than those with moderate perception of novelty (t = 2.17, df = 139, p < .05) and low perception of novelty with marginal significance (t = 1.70, df = 125, p < .09). There was no significant difference in the numbers of family members watching together between those with moderate and low perception of novelty. Put differently, differences between levels in the number of family members watching videotapes together was diminished as the length of VCR ownership increased and the perception of novelty decreased.

On the other hand, as is also expected from the regression analyses, the perception of novelty and length of VCR ownership did not influence on the number of general persons watching videotapes together (Fs [1, 195] = .19 and 1.52 for the length of ownership and perception of novelty, respectively. Both were not significant at the level of .05). These results appear in Table 7.

In sum, the regression analyses and ANOVAs both showed

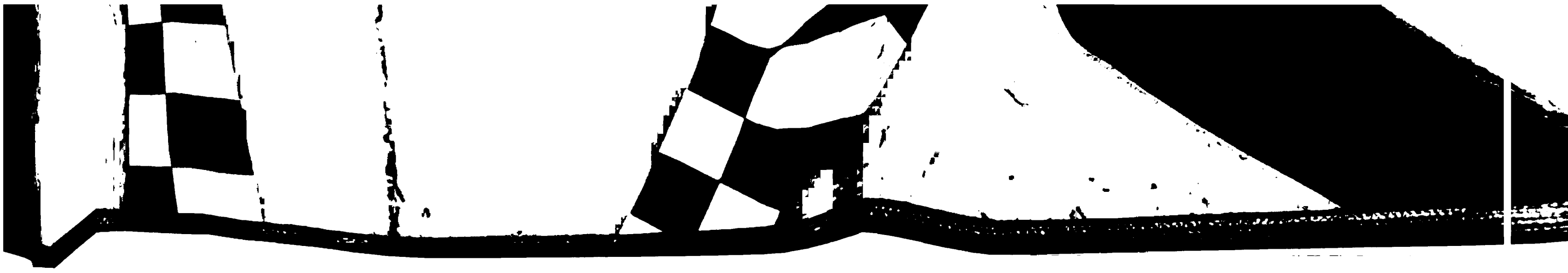

Table 7

ANOVA for the Number of General Persons Watching Videotapes Together on the Perception of Novelty and the Length of VCR Ownership Controlling for the Possession of Own VCR

Source of Variation	SS	DF	MS	F	P
Possession of own VCR	1.74	1	1.74	3.90	.05
Length of VCR ownership	.17	2	.09	.19	ns
Perception of novelty	1.36	2	.68	1.52	ns
Length of VCR ownership x Perception of novelty	.37	4	.09	.21	ns

Means of General Persons Watching Videotapes Together by the Perception of Novelty and the Length of VCR Ownership

Length	Novelty		
	Low (below 3.30)	Mod (3.30-3.87)	High (above 3.87)
Low (below 3.0)	2.59	2.57	2.45
Mod (3.0-4.0)	2.58	2.56	2.42
High (above 4.0)	2.59	2.44	2.28

Note. N's for groups range from 16 to 29.

that the hypothesis one was partially supported. In other words, the length of VCR ownership and perception of novelty was associated with the number of family members and not with the number of general persons watching videotapes together. Further, the length of VCR ownership was a better predictor than the perception of novelty of the number of family members who watched videotapes together.

Hypothesis Two The second hypothesis predicted that heavier VCR users would watch videotapes more individually than lighter VCR users. The results did not support this prediction. The regression analyses indicated that there were effects of the amount of viewing time on the viewing patterns. Surprisingly, however, the direction of the effects were reversed from the predictions. As is evident in Table 8 and 9, the amount of viewing time was associated with the number of family members and general persons who watched videotapes together. The amount of viewing time related positively to the number of family members watching videotapes together ($B = .20$, $p < .05$), and to the number of general persons watching videotapes together with marginal significance ($B = .15$, $p < .06$). Put differently, the more the respondents watched videotapes, the more collectively they tended to watch videotapes with family members as well as general persons. Further, these results of regression analysis indicated that the amount of viewing time was a slightly better predictor of the number of family members

Table 8

Multiple Regression of the Number of Family Members Watching Videotapes Together on the Amount of Viewing and Recording Time Controlling for the Possession of Own VCR

Variable	Family Members Watching Together		
	Beta	MR	R^2
Step 1			
Possession of own VCR	.16*	.16*	.02
Step 2			
Amount of viewing time	.20*	.23**	.05
Amount of recording time	-.10		

Note. * = $p < .05$ for Betas.

* = $p < .05$ and ** = $p < .01$ for MRs.

Table 9

Multiple Regression of the Number of General Persons Watching Videotapes Together on the Amount of Viewing and Recording Time Controlling for the Possession of Own VCR

Variable	General Persons Watching Together		
	Beta	MR	R^2
Step 1			
Possession of own VCR	.14*	.14*	.02
Step 2			
Amount of viewing time	.15**	.19**	.04
Amount of recording time	-.08		

Note. * = $p < .05$ and ** = $p < .06$ for Betas and MRs.

than for the number of general persons who watched videotapes together.

The amount of recording time, however, was not associated with the number of general persons as well as the number of family members who watched videotapes together ($\underline{B}$s = - .10 and - . 07 for the number of family members and the number of general persons, respectively. Both were not significant at the level of .05). To summarize, the results of regression analyses were not consistent with the hypothesis two. The amount of recording time turned out to be not a good predictor of the viewing patterns. Although the amount of viewing time was found to be a good predictor of the number of family members and general persons, the directions of the effects on the viewing patterns were reversed in contrast with the predictions.

Further, as is indicated above, ANOVAs were performed to identify the effect of levels of the amount of viewing time and the amount of recording time on the number of family members and general persons who watched videotapes together. The results of ANOVA appear in Table 10 and 11. As is expected from the regression analyses, the main effect for the amount of viewing time on the number of family members who watched videotapes together was found ($\underline{F}$ [1, 195] = 3.93, $\underline{p}$ < .05). Specifically, heavier VCR users ($\underline{M}$ = 2.47) watched videotapes with more their family members than lighter VCR users ($\underline{M}$ = 2.33). Further, there were not the

Table 11

ANOVA for the Number of General Persons Watching videotapes on the Amount of Viewing and Recording Time Controlling for the Possession of Own VCR

Source of Variation	SS	DF	MS	F	P
Possession of own VCR	1.74	1	1.74	3.98	.05
Amount of viewing time	1.17	1	1.17	2.67	ns
Amount of recording time	.61	1	.60	1.38	ns
Amount of viewing time x Amount of recording time	.02	1	.02	.06	ns

Means of General Persons Watching Videotapes Together by the Amount of Viewing and Recording Time

Viewing Time	Recording Time Low (below 2.0)	Recording Time High (above 2.0)
Low (below 1.57)	2.47	2.31
High (above 1.57)	2.64	2.46

Note. *N*'s for groups range from 16 to 78.

main effects for the amount of recording (Fs [1, 195] = .77, 1.38 for the number of family members and the number of general persons, respectively; both were not significant at the level of .05). These results were consistent with those of the regression analyses. In contrast, for the effect of the amount of viewing time on the number of general persons, this result of ANOVA was inconsistent with that of the regression analyses for the effect of the amount of viewing time. That is, the main effect for the amount of viewing time on the number of general persons was not shown in ANOVA (F [1, 195] = 2.67, p = n.s.). Given that ANOVAs have lower predictive power than regression analyses, this result seems to be plausible.

In sum, the regression analyses and ANOVAs did not support the hypothesis two. The amount of recording time was not associated with the number of family members and general persons who watched videotapes together. The regression analyses indicated that the amount of viewing time was positively associated with the number of family members and the number of general persons who watched videotapes together. These results were inconsistent with the hypothesis two, since they had the directions opposite against effects predicted. Put differently, the heavier VCR users watched videotapes with more family members or general persons than lighter VCR users. On the other hand, ANOVAs indicated that the amount of viewing time produce the effect

only on the number of family members, not the number of general persons. Given that regression analyses are more statistically powerful than ANOVAs, these inconsistencies seem to be plausible.

Chapter Five

DISCUSSIONS

The purpose of this study was to investigate the relationships between the novelty of VCRs, the exposure to VCRs, and the pattern of viewing, i.e., the degree to which people use VCRs collectively (together). In other words, the main concern of this study was to examine how the novelty of VCRs measured by the perception of the novelty about VCR and the length of VCR ownership and the exposure to VCRs measured by the amount of viewing time and recording time were related to the number of general persons and family members with whom VCR users watch videotapes together. Based on the concept of and prior findings on active audience and novelty, two research hypotheses were proposed: (1) users of VCRs to whom the VCR was less novel would watch videotapes more individually than those to whom the VCR was more novel, and (2) heavier VCR users would watch videotapes more individually than lighter VCR users. In order to test these hypotheses, a questionnaire was constructed. In the questionnaire, the perception of novelty, the length of VCR ownership, the amount of viewing and recording time, and the number of general persons and family members with whom the respondents watched videotapes together were asked. Then, this information was collected through a survey method. For analyzing the data, multiple regression analyses, ANOVAs, and t-tests were performed. In the following sections, the results and implications of this investigation will be summarized. Specifically, findings regarding research hypotheses will be described. Then, the implications and limitations of this study will be addressed.

Findings Regarding Research Hypotheses

This study examined the relationships between the novelty of and the exposure to VCRs and VCR users' viewing patterns. Based on the prior findings about other mass media such as TV and radio, the VCR users' viewing patterns were hypothesized to have the positive relationships with the novelty of VCRs and the negative relationships with the exposure to VCRs. In other words, the more the VCR users had the novelty about VCRs and the less time they were exposed to VCRs, the more they tended to watch videotapes collectively.

According to the results from the statistical analyses, the research hypotheses were partially supported. Specifically, the perception of novelty was positively associated with the number of family members with whom the respondents watched videotapes together. That is, the respondents who perceived high novelty about the VCR tended to watch videotapes with larger family members than those who perceived low novelty. As was predicted, the length of

VCR ownership was negatively associated with the number of family members who watched videotapes together. In other words, the longer the period of their possession of VCR was, the more individually the respondents tended to watch videotapes at home. To summarize, the results showed that the novelty of VCR (the perception of novelty and the length of VCR ownership) influenced the number of family members with whom the respondents watched videotapes together. As a result, regarding the number of family members watching videotapes together, hypothesis one was confirmed.

On the other hand, the results showed that the novelty of VCR (the perception of novelty and the length of VCR ownership) was not associated with the number of general persons with whom the respondents watched videotapes together. Thus, regarding the number of general persons watching videotapes, hypothesis one was not supported. One of plausible explanations why the novelty of VCR was associated only with the number of family members, not with the number of general persons is that regardless of the perception of novelty and length of VCR ownership, adolescents who were research participants of this study might dominantly watch videotapes with their peer groups (Roe, 1981, 1987a, 1987b). Further studies which empirically explain the relationships between the perception of novelty about VCRs and length of VCR ownership and the number of general persons watching videotapes together seem

to be necessary to examine differences between peer group and family viewing pattern.

Hypothesis two predicted the negative associations between the amount of exposure to VCRs and viewing patterns. Surprisingly, however, the results indicated that the amount of viewing time was positively associated with the number of family members and general persons watching videotapes together. Put differently, heavier VCR users tended to watch videotapes with more family members and general persons. Although these results were reversed in terms of predicted direction, there is one plausible explanation. Heavier users who, by definition, watch videotapes heavily might be more eager than lighter users to have more chances to watch videotapes in order to frequently watch VCRs. Accordingly, heavier users might be more willing than lighter users to share watching videotapes when other persons such as other family members and their friends plan to watch videotapes. If this is the case, it is natural that heavier VCR users watch videotapes with more family members and friends than lighter users. Accordingly, future studies which investigate the differences in the amount of time and behaviors between heavy users' collective and individual viewing seem to be necessary.

The results revealed that the amount of recording time was not related with the number of family members and the number of general persons. There are two possible explanations why the amount of recording time did not relate to viewing patterns. The first plausible explanation is that the respondents might have recorded only privately favorite programs. As a result, regardless of the amount of recording time, they might enjoy watching the recorded tapes alone. The other possibility is that the respondents might have recorded programs which people are generally interested in. Thus, regardless of the amount of recording time, they might encourage their family members or friends to watch the recorded programs together. However, future research seems to be necessary in order to examine which explanation is more accurate.

In sum, this study found that VCR users with the high novelty about VCR tended to watch videotapes with more family members than those with the low novelty. In contrast, they did not differ in the number of general persons watching videotapes together. The heavy VCR users watched videotapes with more family members and general persons. The VCR users who heavily recorded programs, however, did not differ in the number of family members and general persons watching videotapes from those who lightly recorded programs. In the next section, based on these findings, limitations of this study and suggestions for future study will be suggested.

Limitations of the Study and Suggestions for Future Studies

A few limitations of this study should be acknowledged. First, there was an external validity problem. This study used adolescents as a sample. Most of them were 15 to 18 years old. Further, most of them resided in urban areas. The results of this study might reflect these peculiar characteristics of the sample. In other words, given their ages and resident areas, it might be doubtful whether the results of the study can be applied to other age groups or those who live in rural areas. Accordingly, future studies with different age groups and in different areas are demanded.

The second limitation is related to the survey method employed in this study. Generally, the survey method is vulnerable to the threat of internal validity. Since the responses to the questions in the survey method mainly depend on people's memory, the responses might not be accurate. Further, people tend to modify their responses so as to be socially desirable. Although the statistical analyses indicated that the data were relatively reliable, the survey method was not necessarily the best research method to investigate VCR viewing behaviors. Accordingly, future research which investigate VCR viewing behaviors by adopting other research methods such as direct observation will be suggested.

Finally, one of limitations is related to cross-

sectional design used in this study. Generally, since the cross-sectional design cannot effectively control individual differences such as personality, individual history, etc., the findings in this study might be due to these extraneous variables. Accordingly, future studies which employ repeated measure or longitudinal designs to effectively control these individual differences are recommended. Further, future research which identifies other variables related to VCR viewing patterns seems to be necessary.

APPENDIX

APPENDIX

QUESTIONNAIRE

THE PURPOSE OF THIS STUDY IS TO FIND OUT HOW PEOPLE USE THE VCR AT HOME. YOUR ANSWERS TO THESE QUESTIONS WILL BE VERY VALUABLE INFORMATION FOR THIS STUDY. PLEASE DO NOT PUT YOUR NAME ON THE QUESTIONNAIRE, SO YOUR ANSWERS CAN BE PRIVATE. PLEASE READ INSTRUCTIONS AND QUESTIONS CAREFULLY, THEN ANSWER AS ACCURATELY AS POSSIBLE. THANK YOU FOR YOUR COOPERATION.

THE FOLLOWING QUESTIONS ASK ABOUT YOUR FAMILY ENVIRONMENT. YOU CAN CHECK OR CIRCLE THE ANSWERS THAT BEST DESCRIBE YOUR FAMILY.

1. How many VCRs does your family have?

   0 1 2 3 4 +

   (If your answer is '0', skip to question 19)

2. How long has your family had a VCR? If your family has more than one VCR, please answer this question about the oldest one.

   __________ less than 6 months
   __________ 6 months to one year
   __________ one to two years
   __________ two to three years

__________ three to four years

__________ four to five years

__________ more than five years

3. Do you have your own VCR in your room?

_____ yes _____ no

THE FOLLOWING QUESTIONS ASK ABOUT HOW YOU PERCEIVE/FEEL ABOUT THE VCR. CHECK THE NUMBER THAT INDICATE YOUR RESPONSE.

4. VCRs are new to me.

strongly agree	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5	strongly disagree

5. Sometimes I watch videotapes because I am eager to use a VCR.

strongly agree	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5	strongly disagree

6. I am curious about using a VCR.

strongly agree	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5	strongly disagree

7. I think a VCR is a fascinating tool for entertainment.

strongly agree	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5	strongly disagree

8. Sometimes I play or record programs because I am interested in how a VCR works.

strongly agree	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5	strongly disagree

9. I think watching a video is one of exciting activities.

strongly agree	___ 1	___ 2	___ 3	___ 4	___ 5	strongly disagree

10. I am enthusiastic about using a VCR.

strongly agree	___ 1	___ 2	___ 3	___ 4	___ 5	strongly disagree

HERE ARE SOME QUESTIONS ASKING HOW MUCH YOU USE THE VCR MACHINE. CIRCLE THE ANSWERS THAT ARE RIGHT FOR YOU.

11. How many hours do you usually watch videos (including rented and bought videos) at home <u>from Monday through Friday</u>?

0 1 2 3 4 5 6 7 8 9+

12. How many hours do you usually watch videos (including rented and bought videos) at home <u>on Saturday and Sunday</u>?

0 1 2 3 4 5 6 7 8 9+

13. How many hours do you usually watch videos (including rented and bought videos) at a friend's home during a typical week (<u>from Monday to Sunday</u>)?

0 1 2 3 4 5 6 7 8 9+

14. How many hours do you usually tape programs from TV during a typical week (<u>from Monday to Sunday</u>)?

0 1 2 3 4 5 6 7 8 9+

15. How many hours do you watch videos taped earlier at home during a typical week (<u>from Monday to Sunday</u>)?

0 1 2 3 4 5 6 7 8 9+

16. How many hours do you watch videos taped earlier at a friend's home during a typical week (<u>from Monday to Sunday</u>)?

0 1 2 3 4 5 6 7 8 9+

HERE ARE SOME QUESTIONS ASKING WITH WHOM YOU USUALLY WATCH VIDEOS (INCLUDING RENTED, BOUGHT, AND TAPED). PLEASE CIRCLE OR CHECK ONE OF THE FOLLOWING ANSWERS THAT FITS YOU.

17. With how many people do you usually watch videotapes?
    a. I usually watch videos alone.
    b. I usually watch videos with one person
    c. I usually watch videos with two or more than two persons
18. At your home, how many people do you usually watch videos together?
    a. I usually watch videos alone at home.
    b. I usually watch videos with one person at home.
    c. I usually watch videos with two or more than two persons at home.

THE FOLLOWING QUESTIONS ASK ABOUT YOU AND YOUR FAMILY ITSELF. YOU CAN FILL IN OR CHECK THE ANSWERS THAT ARE RIGHT FOR YOU.

19. My age is __________.

20. I am _____male _____ female.

21. Counting my self, there are _____ people living in my family.

22. The parent(s) who live(s) with me is (are)

_____ Father and Mother

_____ Father and Stepmother

_____ Father only

_____ Mother and Stepfather

_____ Mother only

_____ Other adults

23. My family lives in _____ an apartment _____ a house.

24. My family owns the place we live in _____ yes _____no.

25. The number of bedrooms in my home is _____.

26. The number of cars my family owns is _____.

27. I have my own room _____yes _____ no.

28. The highest educational level of the parent(s) living with me is

__________ some high school

__________ high school

__________ some community college

__________ community college degree

__________ some four-year college

__________ four-year college degree

__________ some graduate school

__________ graduate (or medical or law) degree

__________ other (please, specify)

29. The employment of the parent(s) living with me is

	(Step)Father	(Step)Mother
a. not-employed	_____	_____

b. part-time employment _____ _____

c. full-time employment _____ _____

30. The type of work the parent(s) living with me do(es) is

Father ______________________________________

Mother ______________________________________

Stepfather __________________________________

Stepmother __________________________________

*** THANK YOU VERY MUCH FOR YOUR HELP WITH THIS SURVEY. ***

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