

VIEWING TELEVISION WITHOUT THE REMOTE: A DEPRIVATION STUDY

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### Abstract

This study focused on the way television viewing has been reinvented by viewers with remote control devices (RCDs), which are now commonplace in over 80% of U.S. households. A convenience sample of student viewers (N=47) were measured before and after they gave up their RCDs for a one week period. Compared to the control group (N=49), subjects who were deprived of their RCDs were less motivated to watch TV and received lower gratifications from viewing. Perceived deprivation was higher among female subjects. Respondents in the deprived group also reported less viewing of regular broadcast channels.

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Although the remote control device (RCD) has been available to consumers since radio days (Benjamin, 1993), it was not widely adopted until the 1980s when VCRs and cable television also saw their greatest growth. In 1992, Nielsen estimated that 84% of U.S. households owned RCDs (Klopfenstein, 1993).

Attributes of the RCD explain its widespread diffusion (Klopfenstein, 1993; Rogers, 1983). Changing channels without having to move to the television set gives the RCD a clear relative advantage. Remote control devices remain relatively simple to operate and compatible with the trend toward multifunctional television sets and videocassette recorders (VCR). The RCD is easy to experiment with (trialability) and easy to observe in use (observability), especially since most color television sets and VCRs come equipped with the devices (Electronics Industry Association, 1992). Most interesting to industry and scholarly research, though, is how the RCD has reinvented television viewing for its users.

First of all, people use RCDs to change channels fairly often. Researchers who have videotaped television viewing or measured channel changing electronically have observed channel changing rates of once every 4.4 minutes (Cornwell et al., 1993) up to an average of 107 times an hour (Ferguson, 1994).

People are motivated to use the RCDs not only because they are convenient (the original purpose of the devices), but to access desired programming and avoid undesirable images and people on the set. This has led to new ways of watching television. Most importantly, people change channels to avoid commercials and politicians, to access news and music videos anytime during viewing, (Walker & Bellamy, 1991; Walker, Bellamy, & Traudt, 1993), and to watch more than one program at a time (Ainslie, 1988).

The more people use their RCDs, the more they are exposed to the variety of different cable and broadcast channels. RCD use is linked to higher total and mindful channel repertoires, or the number of different channels that people watch (Ferguson & Perse, 1993). Before widespread adoption of RCDs, a dominant use of television was relaxation (Kubey & Csikszentmihalyi, 1990). Now, we suspect that some viewers use the devices to seek stimulation and excitement (Perse & Ferguson, 1993).

Thus, the RCD makes television viewing more convenient because it eases selective exposure to programming. And, the RCD has changed the way that some people watch television. Because of this, we expect that use of the device would increase people's satisfaction with television viewing. Earlier research did support that viewers perceive benefits from channel changing (Perse & Ferguson, in press). Channel changing levels were significant predictors of perceiving pass time and companionship benefits from television viewing. Use of remote control device, in that study, was a more substantial predictor of perceived benefits than VCRs and cable television subscription. But, channel changing was not related to television viewing satisfaction. The most substantial predictors of satisfaction were higher levels of television exposure and believing that one derives useful knowledge from television.

It is hard to believe that a technology that has been so widely accepted by the audience does not increase television viewing satisfaction. If users do not derive benefits of some kind from an innovation, use discontinues (Rogers, 1983). Earlier studies, though, relied solely on survey data. The present study was based on the expectation that perhaps a better way of examining the effects of RCDs on television satisfaction would be to temporarily remove them from selected households and study the effects of RCD deprivation. If RCDs are not available,

some television viewers who are more reliant on RCDs may find their time spent with television substantially unsatisfying. Others may not be bothered.

This deprivation study, then, had two goals. First, we considered how removal of RCDs would identify some influences on viewers' attachment to and dependency on their remote control devices. Second, we expected that this study of RCD deprivation would reveal how the reinvention of television viewing may be related to RCD use.

#### Deprivation Studies

The mass media are such a regular part of daily life that people often take them for granted. Media use is often habitual and so involved in our daily routine that, for many people, media use may be "mundane" behavior (Ferguson, 1994). Scholars have realized that one of most fruitful ways to study a normal behavior is to "study it under abnormal conditions" (Windahl, Hojerback, & Hedinsson, 1986), such as when people are deprived of media. Berelson (1949) found that people were "more conscious of what that newspaper means to them" (p. 112) during a newspaper strike and also more articulate in discussing their perceptions about newspaper's functions in their daily lives. Over the years scholars have employed media strikes (Berelson, 1949; Elliott & Rosenberg, 1987; Walker, 1990; Windahl et al., 1986), losses of television (Winick, 1988), or experimental television deprivation (Tan, 1977) to explore three basic concerns about media use: (a) the functions of media use; (b) the extent of and influences on media dependency; and (c) functional alternatives, or what activities replace the deprived medium (Windahl et al., 1986).

This study built on this research. We asked a group of college students to volunteer to give up their RCDs for a one-week period. We expected that the week of deprivation would reveal how dependent people are on the RCD for enjoying

television, how a week without the RCD changes viewing, and if there are functional alternatives to the RCD.

#### RCD Dependency

Media dependency or reliance is a concept that has several meanings (Becker & Whitney, 1980; DeFleur & Ball-Rokeach, 1989; Miller & Reese, 1982; Rubin & Windahl, 1986; Wenner, 1982). Dependency has been defined as a condition in which attainment of one's goals is contingent on use of a particular medium. Research has shown that the basic components of dependency are high use of a medium, lower use of functional alternatives, and an affinity for the preferred medium. Windahl et al. (1986) also noted that dependency could be linked to nonmedia variables, such as social context and demographic characteristics.

This research suggests that feelings of RCD deprivation should be positively related to greater use of the RCD. Those who change channels more, then, should miss the convenience and the gratifications offered by the device. Because ritualistic television viewing motives, watching television out of habit or to pass time, has been linked to channel changing (Perse, 1990), we also expected a positive relationship between feelings of deprivation and ritualistic television view motives. Earlier studies have found that men tend to change channels more (Perse & Ferguson, 1993), so RCD deprivation should also be related to sex. And, because television viewing is the context for channel changing, we anticipated that RCD deprivation would be associated with levels of television viewing and affinity, or felt importance of the medium (Wenner, 1982). Finally, we expected that the RCD does influence satisfaction with television viewing (Perse & Ferguson, in press). So, we expected that greater satisfaction with television would be related to perceptions of RCD deprivation.

H1: Perceptions of RCD deprivation will be related positively to:

- (a) channel changing levels, (b) ritualistic television viewing motives, (c) sex (males), (d) television viewing levels, (e) television affinity, and (f) satisfaction with television viewing.

#### Changes in Television Viewing

The remote control device has allowed viewers to reinvent television viewing. Heeter and Greenberg (1985) identified that aspects of new viewing styles include levels of channel changing, ways of searching for programs, and channel repertoires, or the number of different channels that people watch.

The RCD is a significant influence on new viewing styles. RCD use is linked to higher channel repertoires (Ferguson & Perse, 1993), to using the RCD to scan channels to find something to watch (Heeter, 1985). We expect that when people are deprived of their RCDs, there will be a decrease in these aspects of reinvented television viewing.

H2: RCD deprived subjects will (a) watch fewer different channels (have lower channel repertoires) and (b) change channels less for program searches than when they had access to a RCD.

Because these new styles of television viewing should provide some perceived benefits for viewers, we expected that television viewing would be less gratifying for RCD deprived subjects.

H3: RCD deprived subjects will report (a) lower perceived benefits from television viewing and (b) lower television viewing satisfaction than when they had access to a RCD.

#### Functional Alternatives

Walker and his colleagues (1991, 1993) have identified seven functions that the RCD serves: selective avoidance, getting more from television,

annoying others, controlling family viewing, accessing music videos, and finding out what's on television. In this preliminary study, we focused only on the last, the convenience function of the RCD. We considered how viewers without RCDs would find out what programs were available to watch. Quite simply, without the channel scanning available with the RCD, we expected that: H4:RCD deprived subjects would make greater use of (a) printed television guides and (b) cable program preview channels more than when they had access to the RCD.

## Method

### Procedure and Sample

Two in-place groups of college students filled out two self-administered surveys (pretest and posttest) one week apart in Spring 1993. The experimental group was asked to avoid using their RCDs during the treatment week. The second classroom was the control group. Both the treatment group (N=60) and the control group (N=60) were separately comprised of telecommunications majors in two different upper-level media courses at a university in the Midwest.

There were several students in both classes who were not eligible to participate in the study because they did not own remote control devices. Although these students completed both pre- and post-test questionnaires, their responses were not included in the analyses. The study, then, focused only on RCD owners. The exclusions reduced the control group to 49 and the experimental group to 47.

There were no significant differences between the experimental and control groups in any television behaviors, motivations, media use, satisfaction or demographics. The control group was 63.3% male and ranged in age from 19 - 31



( $M = 21.43$ ,  $SD = 1.84$ ). The experimental (deprived) group was 61.7% male and ranged in age from 19 - 26 ( $M = 20.87$ ,  $SD = 1.39$ ). Years of education averaged 14.06 ( $SD = .60$ ) in the control group and 14.02 ( $SD = .76$ ) in the deprived group.

#### Media Use

Cable subscription. Of the control group ( $N = 49$ ), 59.2% subscribed to cable television. This was near the national average of 62% at the time of the survey. Of the deprived group ( $N = 47$ ), 72.3% subscribed to cable television.

Television exposure. Respondents indicated how many hours they viewed "yesterday morning," "yesterday afternoon," and "last night." Summed numbers of hours for the control group ranged from 0 to 12 ( $M = 3.53$ ,  $SD = 2.58$ ). Summed numbers of hours for the deprived group ranged from 0 to 12 ( $M = 3.94$ ,  $SD = 2.64$ ).

Channel Repertoire. Channel repertoire (CR) is defined as the number of channels that a respondent typically watches (Heeter, 1985; Ferguson, 1992). For this study, we used two CR measures tested in earlier surveys (Perse, Ferguson, & McLeod, 1994). Broadcast channel repertoire (BCR) was defined as the sum of the broadcast channels and the cable channels that are nearly identical to broadcast channels for which at least some response (in hours) was given using unaided recall (Ferguson, 1992; Ferguson & Perse, 1994). These included network affiliates, independent stations, superstations (e.g., WTBS), and cable networks (e.g., USA Network). Broadcast channel repertoire represents exposure to channels that offer much the same content as network programming ("more of the same"). Broadcast channel repertoire had a possible range of 0 to 9 channels, given the capacity of the only cable system in the sampling area during the survey. Broadcast channel repertoire for the control group ranged from 0 - 8 channels ( $M = 4.59$ ,  $SD = 1.94$ ). BCR for the deprived group ranged from 1 - 9 channels ( $M = 5.17$ ,  $SD = 1.97$ ).

Cable channel repertoire (CCR), on the other hand, was operationalized as the sum of all cable networks for which at least some response (in hours) was given using unaided recall (Ferguson, 1992; Ferguson & Perse, 1994). Cable channel repertoire reflects exposure to channels that offer more specialized content that differs from network programming (e.g., FNN, The Weather Channel, CNN, MTV, etc.). The possible range was from 0 to 32 channels, given the capacity of the only cable system in the sampling area during the survey. Cable channel repertoire ranged from 0 - 20 ( $\bar{M}$  = 5.08,  $\underline{SD}$  = 4.97). CCR for the deprived group ranged from 0 - 18 ( $\bar{M}$  = 6.13,  $\underline{SD}$  = 4.96).

Channel Search. The respondents were asked how often (0 = never, 8 = always) they flipped around the channels as a substitute for printed TV listings. The pretest mean score for this type of channel searching among the control group was 5.02 ( $\underline{SD}$  = 2.65). The pretest mean score for channel searching among the deprived group was 5.55 ( $\underline{SD}$  = 2.30).

Channel changing motivations. A six-item scale measuring amount of motivation was adapted from RCD motivations identified by Ainslie (1988) and Walker & Bellamy (1991). Respondents identified their RCD motivations for flipping through channels: (1) to watch news, (2) to watch music videos, (3) to peek at other programs out of curiosity, (4) to watch two or more channels at the same time, (5) to avoid commercials, and (6) to avoid certain persons on television.<sup>1</sup> These RCD "changing motives" were indicated by verbal frequencies (0 = never, 8 = always). Averaged changing motive scores for the control group ranged from 0.50 - 7.00 ( $\bar{M}$  = 4.41,  $\underline{SD}$  = 1.55,  $\alpha$  = .84). Changing motive scores for the deprived group ranged from 0.67 - 7.33 ( $\bar{M}$  = 4.28,  $\underline{SD}$  = 1.58).

Viewing Motives. Respondents indicated their agreement (0 = strongly disagree, 8 = strongly agree) with 16 statements about their own reasons for

watching television. The 16 statements were drawn from larger sets of television viewing motivations (Rubin, 1983). These statements were selected because they were items that loaded on instrumental and ritualistic motive factors in previous research (Perse, 1990).<sup>2</sup> Eight items concerned watching television for ritualistic reasons, pass time, habit, companionship, and escape. Eight items focused on instrumental reasons, entertainment, excitement, learning, and social utility.

Item responses were averaged to create scale scores. Ritualistic reasons for the control group ranged from 2 - 60 ( $M = 32.39$ ,  $SD = 14.00$ ,  $\alpha = .87$ ). Ritualistic reasons for the deprived group ranged from 3 - 62 ( $M = 35.15$ ,  $SD = 13.26$ ).

Instrumental reasons for the control group ranged from 8 - 53 ( $M = 36.16$ ,  $SD = 9.30$ ,  $\alpha = .76$ ). Instrumental reasons for the deprived ranged from 21 - 64 ( $M = 38.68$ ,  $SD = 9.23$ ).

#### Perceived Benefits of Television Viewing

Respondents expressed their agreement (0 = strongly disagree, 8 = strongly agree) with seven statements that concern benefits obtained from viewing television, including relaxation benefits, a dominant use of television (Kubey & Csikszentmihalyi, 1990). The seven benefits statements were: "TV viewing helps me learn things that can help me" (control:  $M = 3.63$ ,  $SD = 2.10$ ; deprived:  $M = 4.19$ ,  $SD = 1.88$ ), "Watching TV helps me pass the time" (control:  $M = 4.90$ ,  $SD = 2.18$ ; deprived:  $M = 4.94$ ,  $SD = 2.04$ ), "TV keeps me company" (control:  $M = 3.06$ ,  $SD = 2.00$ ; deprived:  $M = 3.57$ ,  $SD = 2.24$ ), "Watching TV helps me forget about my work and worries" (control:  $M = 4.55$ ,  $SD = 2.26$ ; deprived:  $M = 4.64$ ,  $SD = 2.16$ ), "Watching TV helps me relax" (control:  $M = 5.27$ ,  $SD = 2.03$ ; deprived:  $M = 5.83$ ,  $SD = 1.82$ ), "Watching TV entertains me" (control:  $M = 5.90$ ,  $SD = 1.58$ ; deprived:

$M = 6.11$ ,  $SD = 1.71$ ), and "Watching TV peps me up" (control:  $M = 3.31$ ,  $SD = 1.70$ ; deprived:  $M = 3.57$ ,  $SD = 1.80$ ).

#### Satisfaction Measures

Affinity. Respondents expressed their agreement (0 = strongly disagree, 8 = strongly agree) with five statements drawn from past research (Perse, 1990; Rubin, 1983) that concern perceptions of television's importance.<sup>3</sup> Affinity scores for the control group ranged from 0 - 35 ( $M = 10.45$ ,  $SD = 7.96$ ,  $\alpha = .82$ ). Affinity scores for the deprived group ranged from 0 - 35 ( $M = 10.77$ ,  $SD = 7.67$ ).

Satisfaction. Satisfaction itself was measured with three different items that measured agreement on a nine-point scale (0=not at all, 8=completely): "How valuable did you find your television viewing last week?" "How pleasing was your television viewing last week?" and "How satisfied were you with your television viewing last week?" Satisfaction scores for the control group ranged from 0 to 24 ( $M = 13.16$ ,  $SD = 4.64$ ,  $\alpha = .88$ ). Satisfaction scores for the deprived group ranged from 4 to 23 ( $M = 14.81$ ,  $SD = 3.91$ ).

#### Audience Activity

Guide Use. Use of printed or electronic program listings is a measure of selectivity. We used two items that how often (0 = never, 8 = always) the respondent typically used such guides to help decide what to watch on television. The mean score for printed guide use among the control group was 2.45 ( $SD = 1.88$ ). The mean score for printed guide use among the deprived group was 2.45 ( $SD = 2.03$ ).

Among the control group the mean score for electronic guide use on a cable channel was 2.51 ( $SD = 2.55$ ). The mean score for electronic guide use among the deprived group was 2.76 ( $SD = 2.72$ ).

### Dependence on RCDs

In addition to the formation of treatment and control groups, respondents in the deprived group was also asked to estimate how difficult it was to give up their RCDs for a week (0=not at all, 8=extremely). Further, they were asked how much they missed their RCDs during the week (0=not at all, 8=extremely). The control group was coded as zero for these variables. Both scores were combined into one "deprived" scale ( $\alpha = .95$ ) where average deprivation on an 8.00 scale (0 = feeling not at all deprived, 8 = extremely deprived) was 5.65 ( $SD = 2.14$ ). Of the experimental group, 23.9% of the respondents recorded "extreme" feelings of deprivation.

### Cheating

The deprived group was also asked "If you did use your remote control channel changer during the experimental week, on how many occasions did you use it?" The control group was coded as zero for this "cheating" variable. Cheating ranged from 0 to 20 occasions, with a third of the respondents reporting zero.

### Statistical Analysis

T-tests were used to examine differences between the two groups on the pretest. Within group pairwise comparisons between pretest and posttest were used to test the hypotheses of the study.

## Results

RCD Deprivation

Most of the subjects who gave up their RCDs found it somewhat difficult to give up their devices. Average deprivation on an 8.00 scale (0 = feeling not at all deprived, 8 = extremely deprived) was 5.65 ( $SD = 2.14$ ). In fact, several of our subjects "cheated" and used their RCDs during the experimental week. Of the 46 who participated in the study, 15 reported that they gave up their RCD totally and one subject reported cheating "many many times." The remaining 30 subjects who "cheated" reported using their RCDs an average of 4.73 times.

Although we expected that males would feel more deprived without their RCDs, females reported missing the RCD more ( $M = 6.53$ ) than males ( $M = 5.10$ ,  $t(45) = -2.35$ ,  $p < .05$ ), supporting the opposite of Hypothesis 1(c). But, excluding the one extreme "cheater" from analyses (who was a male), males ( $M = 3.30$ ) and females ( $M = 2.11$ ) did not differ on how often they used their RCDs during the experimental week ( $t[43] = 1.08$ ,  $p = .29$ ).

The first stage of the analysis was to examine the correlates of deprivation (see Table 1). Feelings of deprivation were positively related to pretest perceptions of television satisfaction ( $r = .58$ ,  $p < .001$ ), pretest reports of receiving informational gratifications from television ( $r = .36$ ,  $p < .05$ ), and pretest amount of television viewing ( $r = .35$ ,  $p < .05$ ). Thus, there was support for hypotheses 1(f) and 1(d), concerning satisfaction and amount of viewing, respectively. Hypothesis 1(a) regarding channel changing motives was not quite supported ( $r = .28$ ,  $p = .06$ ). There was no support for Hypothesis 1(b) regarding ritualistic viewing motives ( $r = -.07$ ,  $p = .63$ ) or for Hypothesis 1(e) regarding television affinity ( $r = .23$ ,  $p = .12$ ). Again, the positive correlation ( $r = .33$ ,  $p < .05$ ) between sex (1 = male and 2 = female) and perceived deprivation

was in opposition to Hypothesis 1(c).

Cheating during the experimental week was related positively to pretest CCR ( $r = .37, p < .05$ ) and BCR ( $r = .30, p < .05$ ), pretest use of the preview channel for program search ( $r = .30, p < .05$ ), and pretest levels of channel changing ( $r = .29, p < .05$ ).

The second step of the analysis was to examine how the experimental week without a RCD affected subjects' television behaviors, viewing motives, the benefits that they perceive from television, and their satisfaction with television viewing. The results of the t-tests are summarized in Table 2.

There were several significant differences in subjects television behaviors. Although they did not watch significantly less television overall, subjects watched significantly fewer of the broadcast-type channels during the experimental week ( $M = 4.62$ ) than before ( $M = 5.17, t[46] = 2.46, p < .05$ ), supporting Hypotheses 2(a). The subjects also were significantly less likely to change channels as a method of program search ( $M = 3.36$ ) than before ( $M = 5.55, t[46] = 5.25, p < .001$ ), supporting Hypothesis 2(b). And, as expected, they changed channels for all reasons significantly less without their RCD ( $M = 2.36$ ) than before ( $M = 4.29, t[46] = 8.01, p < .001$ ).

Subjects reported that they were significantly less motivated to watch television for instrumental reasons ( $M = 35.25$ ) than in the pretest ( $M = 38.68, t[46] = 3.28, p < .01$ ). They also reported to be less motivated to watch for ritualistic reasons ( $M = 31.32$ ) than before the experiment ( $M = 35.15, t[46] = 3.11, p < .01$ ).

Subjects deprived of their RCD reported receiving fewer benefits from television viewing, supporting Hypothesis 3(a), in large part. They received lower informational gratifications ( $M = 3.51$ ) than in the pretest ( $M = 4.15, t[46]$

= 4.08,  $p < .001$ ), lower companionship gratifications from television ( $M = 3.09$ ) than before ( $M = 3.57$ ,  $t[46] = 2.49$ ,  $p < .05$ ), fewer relaxation gratifications ( $M = 5.38$ ) than in the pretest ( $M = 5.83$ ,  $t[46] = 2.42$ ,  $p < .05$ ), and reported feeling less entertained from television viewing ( $M = 5.72$ ) than when they used their RCD ( $M = 6.11$ ,  $t[46] = 2.03$ ,  $p < .05$ ).

By contrast, significant differences between the control groups' two weeks' measures were found for only two variables. The control group reported higher levels of channel changing for program search during the second week ( $M = 5.94$ ) than in the first ( $M = 5.02$ ,  $t[48] = 2.66$ ,  $p < .05$ ). Control group subjects also reported receiving higher excitement gratifications during the second week ( $M = 3.84$ ) than in the pretest ( $M = 3.31$ ,  $t[48] = 2.45$ ,  $p < .05$ ).

Although there was a slightly lower posttest level of satisfaction in the deprived group, the difference was not large enough to support Hypothesis 3(b). The posttest level of affinity actually rose slightly, though not significantly. There was also no support for either Hypothesis 4(a) regarding printed guide use ( $t[46] = 0.08$ ,  $p = .94$ ) or Hypothesis 4(b) regarding electronic preview guide use ( $t[46] = -1.39$ ,  $p = .17$ ).

#### Discussion

We've all heard anecdotes about households that have lost the remote control device. People search frantically for the device and often avoid changing channels until they find it. The RCD has been such an accepted and common part of television viewing that people do not realize how important it is until they watch television without it. Based on the RCD's widespread adoption and use, we undertook this study of RCD deprivation to explore how the RCD has reinvented television viewing and contributed to television viewing satisfaction.

We found that most of our subjects found it somewhat difficult to give up



their RCDs for the week. Our first hypotheses, though, were only partially supported. Feelings of RCD deprivation were positively related to television viewing and television satisfaction. The more television subjects watched and the more satisfied they were with television, the more deprived they felt.

Although prior research found that habitual television viewing motives were a significant predictor of adolescents' perceptions television deprivation during a strike (Windahl et al., 1986), in our study ritualistic motives were unrelated to RCD deprivation. We also found that there were no significant differences in receiving ritualistic pass-time gratifications from television viewing during the week without the RCD. Because ritualistic motives and gratifications focus on the medium of television, rather than the content (Rubin, 1984), the ability to access different programs conveniently may not necessarily be important for ritualistic viewers. Future research should continue to explore the nature of ritualistic media use.

There were two unexpected findings. First, channel changing motivations were not significantly related to RCD deprivation. We suspect that the near significant relationship was due to sample size. More surprising, the results of our study showed that females felt significantly more deprived without the RCD than males. Research and anecdotal evidence suggests that males use and value the RCD more (Perse & Ferguson, 1993). Our finding was not due to cheating, or using the RCD during the experimental week. There were no significant differences in levels of cheating across males and females. Although studies have found that sex differences in RCD use are less substantial between younger males and females (Perse & Ferguson, 1993), clearly the RCD had different meanings for our male and female subjects. Future research should continue to explore sex differences in uses and gratifications of newer television technologies.

We found stronger evidence that the RCD changes the way that people watch television. After only a week without the RCD we found significant differences in our subjects' television viewing styles. As expected, there were significantly lower levels of channel changing. More interesting were the differential changes in broadcast and cable channel repertoires. Our subjects' cable channel repertoires did not change significantly. Their broadcast channel repertoires, though, were reduced significantly. When channel changing is not so convenient, presumably our subjects "sacrificed" broadcast-type channels to continue to watch more specialized cable channels. The finding suggests that television viewing has been reinvented by RCDs and cable subscription. Sparkes and Kang (1986) observed that, over time, cable subscribers grow to value the specialized channel offering of cable television. We found that, without the channel changing convenience of the RCD, people may be reluctant to eliminate those channels from their repertoire. Future research should study the trends in the composition of channel repertoires over time. Clearly, with our college student sample, the specialized channels of cable television are an important part of their television viewing.

We found mixed evidence for our expectation that subjects would be less satisfied with television without the RCD. Although satisfaction declined slightly, it was not a significant decrease. This was surprising considering how strongly satisfaction was linked to feelings of deprivation. Perhaps a one-week deprivation period is too short to make a strong impact on television viewing satisfaction.

We did find, though, that people reported lower levels of several television viewing benefits. For our deprived subjects, television viewing was less informational, less relaxing and entertaining, and provided fewer companionship

gratifications. Earlier research noted that the benefits obtained from television viewing are the strongest predictors of television satisfaction (Perse & Ferguson, in press). Perhaps, over time, the reduction of those benefits might influence people's satisfaction with television.

We did not propose hypotheses about television viewing motivation. We did find, though, that after a week without a RCD, our subjects reported significantly lower television viewing motives. In other words, without the RCD, our subjects were less motivated to watch television for instrumental, content-oriented reasons, and for ritualistic, medium-centered reasons. Clearly future research should continue to explore how the benefits associated with newer television technologies affect the motivation to watch television and the satisfactions derived from its use.

We expected that subjects without a RCD would use functional alternatives to grazing to locate programs to watch. Changing channels to search for programs was significantly reduced in our subjects deprived of their RCD. But, they did not turn to functional alternatives, such as printed television guides. This may be due to lack of availability for our subjects. We did not assess their access to those guides. Perhaps our subjects did not subscribe to newspapers or buy TV Guide. A week may not be long enough to change print media use. And, although there was an increase in use of the electronic program guide, the difference was not significant. Future studies should identify other functional alternative to "channel surfing."

We focused only on the use of the RCD for program searches. Walker and his colleagues (1991, 1993) identified several other uses of the RCD. Future research might explore functional alternatives to the RCD to avoid undesirable programs and people, to get more from television, to control family viewing, and to access

formatted cable programming, like news and videos.

The results of our study support our expectation that RCDs do reinvent television viewing. Without them, our subjects changed channels less and concentrated their viewing on specialized cable channels at the expense of broadcast-type channels. Although they did not report to be less satisfied with television, they did estimate fewer entertainment and relaxation benefits and were less motivated to watch television for all reasons during the week without the RCD. Future research should continue to study the new television environment. We expect that viewers with RCDs, cable, and VCRs not only have new viewing styles, but also have formed new expectations of what television can offer.

Notes

<sup>1</sup>The six channel changing motives were: "How often do you follow more than one program at a time using the remote control?"; "How often do you avoid commercials using the remote control to change channels?"; "How often do you change channels because you want to peek at other programs?"; "How often do you change channels to watch music videos?"; "How often do you change channels to look around for the news?"; and "How often do you change channels to avoid obnoxious people on TV?"

<sup>2</sup>The eight ritualistic statements were: (I watch television) "Because it gives me something to occupy my time," "Just because it's on," "When I have nothing better to do," "When there's no one else to talk to be with," "Because it passes the time away, particularly when I'm bored," "So I can get away from the family or others," "Because it makes me feel less lonely," and "Because it's a habit, just something I do."

The eight instrumental reasons were: (I watch television) "Because it helps me learn things about myself and others," "Because it entertains me," "Because it's thrilling," "Because it's enjoyable," "So I can talk with others about what's on," "Because it's exciting," "Because it amuses me," and "So I can learn about what could happen to me."

<sup>3</sup>The five affinity statements were: "I would rather watch TV than do anything else," "I could easily do without television for several days" (recoded), "I would feel lost without television to watch," "Whenever I'm unable to watch television, I really miss it," and "Watching television is one of the more important things I do each day."

## References

- Ainslie, P. (1988, September). Confronting a nation of grazers. Channels: The business of communications, pp. 54-62.
- Becker, L. B., & Whitney, D. C. (1980). Effects of media dependencies: Audience assessment of government. Communication Research, 7, 95-120.
- Benjamin, L. (1993). At the touch of a button: A brief history of remote control devices. In J. R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control in the new age of television (pp. 15-22). Westport, CT: Praeger.
- Berelson, B. (1949). What "missing the newspaper" means. In P. F. Lazarsfeld & F. N. Stanton (Eds.), Communication research 1948-1949 (pp. 111-129). New York: Harper.
- Burgoon, J. K., & Burgoon, M. (1980). Predictors of newspaper readership. Journalism Quarterly, 57, 589-596.
- Cohen, A. A. (1981). People without media: Attitudes and behavior during a general media strike. Journal of Broadcasting, 25, 171-180.
- Cornwell, N. C., Everett, S., Everett, S. E., Moriarty, S., Russomanno, J. A. Tracey, M., and Trager, R. (1993). Measuring RCD use: Method matters. In J. R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control in the new age of television (pp. 43-56). Westport, CT: Praeger.
- DeFleur, M. L., & Ball-Rokeach, S. (1989). Theories of mass communication (5th ed.). New York: Longman.
- Dobos, J. (1992). Gratification models of satisfaction and choice of communication channels in organizations. Communication Research, 19, 29-51.
- Electronics Industry Association. (1992). Electronic market data book. Washington, DC: Author.

- Elliott, W. R., & Rosenberg, W. L. (1987). The 1985 Philadelphia newspaper strike: A uses and gratifications study. Journalism Quarterly, 64, 679-687.
- Ferguson, D. A. (1992). Channel repertoire in the presence of remote control devices, VCRs, and cable television. Journal of Broadcasting & Electronic Media, 36, 83-91.
- Ferguson, D. A. (1994). Measurement of mundane TV behaviors: Remote control flipping frequency. Journal of Broadcasting & Electronic Media, 38, 35-47.
- Ferguson, D. A., & Perse, E. M. (1993). Media structure and audience influences on channel repertoire. Journal of Broadcasting & Electronic Media, 37, 31-47.
- Gross, L. S. (1992). Telecommunications: An introduction to the electronic media (4th ed.). Dubuque, IA: Wm. C. Brown.
- Heeter, C. (1985). Program selection and the abundance of choice: A process model. Human Communication Research, 12, 126-152.
- Heeter, C., & Greenberg, B. S. (1985). Cable and program choice. In Dolf Zillmann & Jennings Bryant (Eds.), Selective exposure to communication (pp. 203-224). Hillsdale, NJ: Erlbaum.
- Klopfenstein, B. C. (1993). From gadget to necessity: The diffusion of remote control technology. In J. R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control in the new age of television (pp. 23-39). Westport, CT: Praeger.
- Kubey, R., & Csikszentmihalyi, M. (1990). Television and the quality of life: How viewing shapes everyday experiences. Hillsdale, NJ: Erlbaum.
- LaRose, R., & Atkin, D. (1988). Satisfaction, demographic, and media environment predictors of cable subscription. Journal of Broadcasting & Electronic Media, 32, 403-413.
- Levy, M. R., & Windahl, S. (1984). Audience activity and gratifications: A

- conceptual clarification and exploration. Communication Research, 11, 51-78.
- Lichtenstein, A., & Rosenfeld, L. (1984). Normative expectations and individual decisions concerning media gratification choices. Communication Research, 11, 393-413.
- Miller, M. M., & Reese, S. D. (1982). Media dependency as interaction: Effect of exposure and reliance on political activity and efficacy. Communication Research, 9, 227-248.
- Palmgreen, P., & Rayburn, J. D. (1985). A comparison of gratifications models of media satisfaction. Communication Monographs, 52, 334-346.
- Perse, E. M. (1990). Audience selectivity and involvement in the newer media environment. Communication Research, 17, 675-697.
- Perse, E. M., & Ferguson, D. A. (in press). Gratifications and the newer media technologies. Journalism Quarterly, 71.
- Perse, E. M., & Ferguson, D. A. (1993). Gender differences in remote control use. In J. R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control in the new age of television (pp. 169-186). Westport, CT: Praeger.
- Perse, E. M., Ferguson, D. A., & McLeod, D. M. (1994). Cultivation in the Newer Media Environment, Communication Research, 21, 79-104.
- Rogers, E. M. (1983). Diffusion of innovations (3rd ed.). New York: Free Press.
- Rubin, A. M. (1983). Television uses and gratifications: The interactions of viewing patterns and motivations. Journal of Broadcasting, 27, 37-51.
- Rubin, A. M. (1984). Ritualized and instrumental television viewing. Journal of Communication, 34(4), 67-77.
- Rubin, A. M., & Windahl, S. (1986). The uses and dependency model of mass communication. Critical Studies in Mass Communication, 3, 184-199.



- Sparkes, V. M., & Kang, N. (1986). Public reactions to cable television: Time in the diffusion process. Journal of Broadcasting & Electronic Media, 30, 213-229.
- Tan, A. S. (1977). Why TV is missed: A functional analysis. Journal of Broadcasting, 21, 371-380.
- Walker, J. R. (1990). Time out: Viewing gratifications and reactions to the 1987 NFL players' strike. Journal of Broadcasting & Electronic Media, 34, 335-350.
- Walker, J. R., & Bellamy, R. V. (1991). Gratifications of grazing: An exploratory study of remote control use. Journalism Quarterly, 68, 422-431.
- Walker, J. R., Bellamy, R. V. Jr., & Traudt, P. J. (1993). Gratifications derived from remote control devices: A survey of adult RCD use. In J. R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control in the new age of television (pp. 103-112). Westport, CT: Praeger.
- Wenner, L. A. (1982). Gratifications sought and obtained in program dependency: A study of network evening news programs and 60 Minutes. Communication Research, 9, 539-560.
- Windahl, S., Hojerback, I., & Hedinsson, E. (1986). Adolescents without television: A study in media deprivation. Journal of Broadcasting & Electronic Media, 30, 47-63.
- Winick, C. (1988). The functions of television: Life without the big box. In S. Oskamp (Ed.), Television as a social issue (pp. 217-237). Newbury Park, CA: Sage.

Table 1  
Correlates of Deprivation

	Deprived	Cheated
Behaviors		
TV Hours	.35*	-.16
Cable Channel Repertoire	-.01	.37*
Broadcast Channel Repertoire	.03	.30*
Guide Use	.11	-.18
Preview Use	.11	.30*
Channel Search	.22	-.09
Channel Changing Motives	.28	.29*
Viewing Motives		
Instrumental	.00	.10
Ritual	-.07	.09
Benefits		
Learn	.36*	-.01
Pass time	-.14	-.07
Company	.01	.17
Forget	-.07	.10
Relax	.08	.02
Entertain	.17	-.01
Excite	.03	-.13
Satisfaction Measures		
Affinity	.23	-.10
Satisfaction	.58***	-.14
Age	-.03	-.21
Sex	.33*	-.13
Education	.09	-.00
Cable subscription	-.07	.10

Note. N = 47. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 2

t-Tests: Control and RCD-Deprived Groups, Pre- and Post-Test Measures

	Control (N = 49)			Deprived (N = 47)		
	Pre	Post	<u>t</u>	Pre	Post	<u>t</u>
<b>Behaviors</b>						
TV Hours	3.53	3.71	0.64	3.94	3.60	0.90
CCR	5.08	4.78	1.17	6.13	5.72	0.86
BCR	4.59	4.57	0.10	5.17	4.62	2.46*
Guide Use	2.45	2.14	1.38	2.45	2.43	0.08
Preview Use	2.51	2.47	0.20	2.77	3.11	1.39
Ch. Search	5.02	5.94	2.66*	5.55	3.36	5.25***
Ch. Changing	4.41	4.35	0.49	4.29	2.36	8.01***
<b>Viewing Motives</b>						
Instrumental	36.16	35.69	0.47	38.68	35.25	3.28**
Ritual	32.39	31.41	0.73	35.15	31.32	3.11**
<b>Benefits</b>						
Learn	3.63	3.55	0.33	4.15	3.51	4.08***
Pass time	4.49	4.37	0.51	4.94	4.64	1.27
Company	3.06	3.31	1.11	3.57	3.09	2.49*
Forget	4.55	4.37	0.56	4.64	4.15	1.92
Relax	5.27	5.14	0.51	5.83	5.38	2.42*
Entertain	5.90	5.63	1.38	6.11	5.72	2.03*
Excite	3.31	3.84	2.45*	3.57	3.53	0.16
<b>Satisfaction Measures</b>						
Affinity	10.45	10.61	0.21	10.77	12.02	1.68
Satisfaction	13.16	13.78	1.03	14.81	14.00	1.37
Age	21.43			20.87		
Sex	63.3% male			61.7% male		
Education	14.06			14.02		
Cable TV	59.2% subscribe			72.3% subscribe		

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