Switching during commercial breaks
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7 Conclusions and recommendations

A great many conclusions can be drawn from this study of switching behaviour. The hypotheses that have been accepted on the basis of the results of the two models and those that have been rejected were reviewed in the previous chapter. As a result of the findings in this study, many of the outcomes predicted on the basis of previous research need to be adjusted. In this chapter, the conclusions that can be drawn from this research are discussed and recommendations based on these conclusions are made. The relevance of this study for the field of communication science is discussed in section 7.1. Section 7.2 examines the implications of this study for television broadcasters, sales houses, advertisers and media planners and offers practical recommendations. Finally, in section 7.3 recommendations are made for further research.

7.1 Implications for communication science

7.1.1 Are television viewers selective?

In section 1.1 two contrasting theoretical approaches in communication science were discussed, one of which assumed that television viewing was passive and non-selective, the other emphasised the selective and active nature of television viewing behaviour. In 1985, Levy and Windahl called the question of whether the mass media audience is an active or passive participant in the communication process “one of the longest-lived controversies in the short history of communication research” (p. 109). Now, almost 15 years later, the debate might be less intense, but the question of whether television viewing is selective behaviour or not still cannot be considered to have been answered definitively.

This study of switching behaviour does not provide an unequivocal answer to this question. On the basis of a 28.6% average decrease in audience ratings, it would be foolish to argue that 28.6% of the viewing behaviour during commercial breaks is selective or that the remaining 72.4% supports the claim that viewers are not selective. Every television viewer knows from personal experience that there are moments when one is very selective in choosing what to watch, while at other moments one will watch anything, including commercials, simply because it is on. Both types of television viewing take place and any attempts in communication science to achieve a theoretical understanding of either type of behaviour are justified.

This study can contribute more to this debate than just a demonstrated value for
the average decrease in audience ratings. The analysis of the large number of explanatory variables has provided some insight into the motivation of viewers in switching away or continuing to watch during a commercial break. The analysis indicates that viewers do not allow themselves to be bombarded by unwanted advertising against their will and that a portion of the audience will switch away from commercial breaks. When switching occurs, it usually occurs directly at the start of the break (and thus is not dependent on the content of the break). Moreover, in many instances of switching, there appears to be a strong relationship between a viewer's decision to switch and the programming on the channel involved or that of other channels opposite it. In these instances, switching is not a response to specific commercials, but a choice that arises out of a general desire to avoid advertising or out of rational behaviour patterns directly related to the programmatic content of the medium. The factors in the model indicate that switching is active and selective behaviour, motivated by personal needs.

Of all advertising GRPs, 89% are a result of viewers who do not switch, but continue watching through the entire break. The largest portion of the audience does not switch away during the break. This is not to say that these “stayers” are less selective than switchers. This study provides clear indication that not switching away is also a form of selective behaviour in some instances. Despite how much people claim to object to television advertising, once in front of the television screen they are not easily driven away by one or more potentially irritating commercials. Viewers who continue to watch a commercial break should not be considered helpless victims of advertising terror; they may be motivated viewers who have consciously chosen to watch a specific programme on the channel in question and are not dissuaded from their choice by a commercial. From the analysis, it can be concluded that people do not watch advertising so much out of habit but that they base their choice to continue watching or to switch on the programming on offered at that moment. If selectivity in television viewing is defined as the conscious selection of a specific programme on the basis of the programming on various channels, then this study supports the proposition that television viewing in many instances is a selective activity, whether it involves deciding to switch away or not. The choice to switch or remain is largely based on the programming on the channel being watched and on the channels broadcasting opposite it.

7.1.2 Effect of programme content

Goodhardt, Ehrenberg and Collins (1975) argued that the time of broadcast was a more important factor than programme content in determining the flow of viewers (see sections 1.2.1 and 1.2.2). Gerbner summarised this position: “Most viewers watch by the clock and not by the program” (1979, p. 216). Elliot (1973) claimed that the most important reason why programmes were watched was their avail-
ability. In contrast, Webster and Wakshlag (1983) argued that programme content was an important factor for viewers in selecting what to watch.

Once again, more than enough examples can undoubtedly be found in everyday viewing behaviour to support both approaches. The results of this study provide some support for both positions, but the balance of the evidence favours Webster and Wakshlag. An effect from the factor time of broadcast was found, but it was very small. There was no effect from the content of the commercials in the breaks. Considerable evidence was found to indicate that programme content is the critical factor in viewer selectivity. The analysis indicates that programming on the channel on which a break is broadcast and programming on other channels broadcasting opposite the break are the most important factors in determining switching during a commercial break. To paraphrase Gerbner, this study demonstrates that viewers switch by the programme, and not by the block or the clock.

7.1.3 Moment of selectivity

The three phases of selectivity in the model proposed by Levy and Windahl (1985) were discussed in section 1.2.2. These three phases are distinguished by the moment of exposure to the medium and are advance expectation and choice, activity during the experience and selectivity in the post-exposure situation. The distinction in moments of selectivity can also be applied to switching during commercial breaks. In section 5.1, it was reported that the average decrease rate in audience ratings for all breaks in the study was 0.88, indicating that the majority of viewers who switched away from a break did so at the start of the break or just before, during the last two minutes of the previous programme. From this, it can be concluded that the decision to switch away from a commercial break is more often made before rather than during the break. In the terms of Levy and Windahl’s phase model, switching during commercial breaks is usually based on advance expectation and choice made prior to the experience of the break and is much less often a selective activity during the experience itself.

7.1.4 Bond with the medium

The results of this study are of particular relevance to the new theoretical approaches in communication science discussed in section 1.2.3. It appears that the increase over time in the amount of television available has been accompanied by an increase in the amount of channel switching and a decrease in the loyalty viewers feel to the specific channels. This provides direct support for the proposition that with the increase in the amount of television on offer comes a weakening in the bond between the audience and the medium (the channels).

In this regard, it is interesting to note that no direct effect on switching behaviour during commercial breaks was demonstrated for overload, the multiple confrontations with a single commercial. This would seem to indicate that the con-
sumer has not lost the willingness to expend effort for the medium, despite the wide range of channel and programmes provided. Once a viewer has chosen to watch a specific channel, watching commercials is taken for granted, regardless of how often or how long commercials have been shown. This is also the case for commercials with little or no relevance for the audience; their presence in a break does not move the viewer to switch to another channel. The viewing audience is not only fragmented and segmented, but motivated as well. This study supports the proposition that, with respect to consumer use of the medium, television has transformed from an allocution medium into a consultation medium (see section 1.2.3).

7.1.5 The role of viewer characteristics
Viewer demographics play a central role in many previous models of media use. Household characteristics such as social background and milieu, as well as personal characteristics, have a prominent position in McQuail’s “pragmatic” model of audience choice (1997). In this study, however, these characteristics only had a very minor role in accounting for switching behaviour. According to the analysis, switching during commercial breaks is best accounted for by “media side factors”, characteristics related to the medium, such as programming, rather than by “audience side factors”. However, it should be noted that the personal characteristics included in the research were limited to standard background characteristics and a series of variables related to media use as described in section 3.4, such as the use of a TV guide or a VCR, social viewing, et cetera. Norms and attitudes can be expected to play a role in explaining switching behaviour, but these personal variables could not be included in the research (see also the sections 3.4.11 and 7.3).

7.1.6 Scientific research and the people meter
This study is of additional scientific value because of the fact that the analysis is based on behaviour as registered by the people meter in the CKO. Analysis using people meter data makes separate fieldwork unnecessary, and enables detailed analysis of large quantities of data measured with a high degree of precision and reliability. In social science research, the opportunity does not often arise to observe human behaviour using electronic registration in a non-laboratory setting, thus avoiding the effects of memory and of socially desirable answers. However, it should be noted that the large amount of data in the CKO creates its own complexities.

This study provides an example of the possibilities to extrapolate the large and very detailed body of data offered by the CKO to a more theoretical level of abstraction. It is regrettable that not more advantage has been taken of the opportunities offered by people meter data registration. Since the introduction in 1987 of the people meter audience research in the Netherlands, no university level research
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on viewing or switching behaviour based on people meter data has been carried out, with the exception of a few articles and a master’s thesis. Vierkant’s dissertation (1987) on viewing behaviour dates from the period that diaries were used to record viewing behaviour and, in her dissertation on heavy viewers, Frissen (1992) made use of interview data. Hopefully, this study of switching behaviour will inspire further use of the research possibilities offered by the CKO.

7.2 Practical applications

In this section the practical utility of the results of this research on switching behaviour for television channels and sales houses, advertisers and media planners is discussed. The interests these parties have in a better understanding of the factors that influence switching during commercial breaks was discussed in section 1.1. Practical applications of the research and the concrete measures needed to carry them out are presented below, based on the outcomes in the models for the increase and the decrease in ratings.

For all of the measures discussed in the following sections, it is the case that the effects described can only be achieved if these measures are applied in moderation. The models on which these recommendations are based are only valid within the existing variation of the variables; extrapolation beyond the normal variation (to values that do not exist in the observed breaks, e.g. a break length of 10 minutes) is meaningless.

7.2.1 Recommendations for television channels

Sales houses and television channels naturally have an interest in reducing the loss of viewers as a result of switching away during advertising. The stimulation of new viewers switching in can result in an increase in advertising GRPs. On the other hand, reducing both forms of switching, means that the viewer profile of the break could be kept stable, increasing the attractiveness of selective breaks to advertisers. Channels have developed different strategies over the years to reduce the switching during breaks and the resulting loss of viewers. Sometimes the attempts are desperate. In a speech at an industry symposium in 1984, NBC research vice-president William S. Ruben, urged his audience “to educate the viewers about how important it is to support those who bring free TV to them. When they catch a program they should make a point of viewing the commercials. It’s a patriotic thing to do” (Nakra, 1991, p. 221).

Appeals to patriotism aside, channels can use programming to influence viewers’ switching behaviour. A better understanding of switching behaviour can provide those responsible for programming with the means to combine available programming in an optimal schedule that strives for the highest possible audience ratings as well as the lowest level of audience loss during advertising breaks. Con-
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Considerable gains in marketable advertising GRPs can be realised by reducing the decrease in ratings during advertising breaks, while somewhat smaller gains can be expected from a stimulation of the increase in ratings for advertising.

On the basis of the results of this study (as reported in table 10 and 11) four recommendations can be made for using programming to reduce the loss of ratings during advertising breaks resulting from switching behaviour.

Reduce changes in viewers profile
Considerable switching occurs in the breaks between programmes as a result of shifts in programming directed at different groups of viewers. During those shifts in programme profiles, the number of new viewers (on average, 2.8% of the viewers in the first minute following the end of the break) can only partially compensate for the loss of viewers (an average of 4.5 percentage points of the viewers during the second minute preceding the break). An additional 1.3 percent of the viewers watching the channel in the second minute preceding the break are lost in a break between programmes with audiences from different social classes. Ideally, if programming preceding and following the break attract an audience with the same age and social class categories, the average net loss of ratings during breaks can be reduced by 3 percentage points from 22% to a loss of 19%.

Shorter programmes
More switching is likely to occur during breaks preceding and following long programmes than during breaks preceding and following short programmes. Starting to watch a long programme demands relatively more commitment from a viewer.

52 In addition to these, the results of this study suggest a number of options that are not relevant in practice. For example, some programme categories have an effect on the switching behaviour in the preceding or following breaks. The number of viewers increases for breaks placed before the news (3.6% of the group of viewers during the minute after the break) and less switching away occurs after light information programmes and “other programmes.” However, it is unlikely that this effect can be manipulated. The increase in new viewers during breaks before news programmes will most likely only occur before specific news broadcasts and is not likely to occur for a channel with only news broadcasts. Similarly, no realistic recommendation can be based on the effect of series on switching behaviour. Increased broadcasts of programmes with an episodic structure at the expense of one time broadcasts would require a substantial change in programming, but the effect on switching would be minimal.

Programming for special target groups that appear in the model (such as VCR users) may have an effect on switching, but it is doubtful whether such a programme would attract a sufficiently selective audience. Moreover, further research into the reasons for a reduced switching behaviour among video recorder owners is needed before there can be any certainty that the desired effect would be achieved. A higher rating for a channel will result in a relatively greater reduction in the loss in ratings during a break. Normally, however, the maximising of a channel’s ratings is an independent goal that takes precedence over the reduction of switching. When programming for a small audience (narrow casting), special interest channels need to be aware of the relatively large decline in viewers.

In addition, the average level of effect defined as the mean of the explanatory variable multiplied by the B-coefficient (see appendix 11).
and, at the end of a long programme, viewers may be curious about what they have been missing on other channels, or they have more need of a natural break than a commercial one. The loss in ratings was reduced by 2.5 percentage points for every ten minute reduction in programme length (average length is 21 minutes)\textsuperscript{54}. It is recommended, then, that the number of long programmes and their length should be limited.

In principle, this recommendation for shorter programmes also applies to programme segments of programmes interrupted by centre breaks. In a separate analysis of centre breaks, it was found that the decrease in ratings for a break decreased as the length of the preceding programme segment decreased\textsuperscript{55}. Shortening these programme segments implies introducing additional centre breaks.

Reduce non-programme items

Many viewers switch away when the announced programme does not begin directly after a commercial break because of the broadcast of other material, such as a programme overview or the announcement of other programmes. A reduction of a minute in the amount of non-programme material broadcast following a break will reduce the loss of ratings by 2.7 percentage points. Eliminating these items (which now average 15 seconds per break) would have reduced the average loss of ratings for breaks by 0.7 percentage points.

Programmes for specific target groups

Broadcasting more programmes aimed at specific target groups can reduce switching away during advertising breaks.

\begin{itemize}
  \item Noticeably less switching took place during commercial breaks following children’s programmes (10\% of all breaks). On average, the loss of ratings for these breaks was 10.5 percentage points lower than for breaks after other types of programmes.
  \item Women switched away from advertising less often than men. A break whose audience is entirely made up of women has a 7\% lower decrease in ratings less than a comparable break with an audience composed solely of men.
  \item Less switching took place around family programmes and other sorts of programmes that were watched by relatively large groups of people on a single television set. An increase with one extra viewer per set would have reduced the loss of ratings by 4.9 percentage points.
\end{itemize}

\textsuperscript{54} This is the combined effect on switching behaviour in the breaks before and after a programme.

\textsuperscript{55} The separate model for centre breaks was constructed with all variables that had been included in the model for the decrease in ratings for all breaks. The β-value for the factor “length of the programme before the break” was even higher in the model for centre breaks (β = 0.24) than in the model for all breaks.
7.2.2 Recommendations for sales houses

Though restricted by some legal restrictions, sales houses, in consultation with channel managers, are free to place advertising breaks in the programming and fill these breaks with commercials, promos, leaders and other material. If they have access to such information, sales houses can take programming on other channels into account when programming commercial breaks. In theory, sales houses such as STER and IP, which work with more than one channel, are in a position to adjust the programming on their various channels to take advantage of the potential effect on switching behaviour of programming on other channels opposite a break. Single channel broadcasters are only able to adjust the programming of breaks in line with programming on the other channels.

Potentially, all of the effects relating to the placement of the break with respect to programming on the channel and on other channels opposite are relevant for sales houses. In order to avoid the loss of viewers as a result of switching, sales houses are advised to examine the results of this study, and apply the recommendations when scheduling advertising breaks in collaboration with channel programmers.

Increased revenues

The financial reasons for evaluating the practical implications of this study and seriously considering the recommendations made seem evident. The number of new viewers can be greatly increased by even a small decrease in the amount of switching. Each reduction in the decrease in audience ratings or growth in the increase in audience ratings produces a large number of extra advertising GRPs. In 1995, for example, a reduction in switches that resulted in reducing the decrease in ratings with one percent point would have meant that the five channels involved in the study could have broadcast four and a half days without advertising without suffering a loss in advertising revenues. If channels had actually been able to sell the advertising time lost by one percentage point of the decrease in ratings in 1995, this would have generated more than 5 million Euros in extra advertising revenues.

Break length

Once the commercial breaks have been scheduled, sales houses can do little to ac-

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56 In the period from January through April 1995, NL123 and RTL45 lost 37,187 GRPs through a 28.6% loss of ratings (see table 7 in section 5.3). Assuming the research period is representative, 3,900 extra GRPs can be obtained on a yearly basis with each reduction of one percent point in the decrease in ratings. Given 54 minutes of advertising per day per channel and an average commercial rating of 3.2%, this figure is the equivalent of the total number of advertising GRPs over a 4.5 day period.

57 Given total net advertising revenues of approximately 445 million Euros for STER and IP in 1995 (VEA/BBC), and a total of 327,000 GRPs for all five channels, the average yield from a single GRP (persons 6+) can be estimated at 1,400 Euros (700 Euros net per 30 seconds).
tually reduce the level of switching during commercial breaks. The only recommendation specifically directed at sales houses concerns break length and has only a limited effect on switching behaviour. The loss in ratings increases by 1.3 percentage points for every extra minute that a commercial break lasts. However, there is also a comparable increase in ratings of 1.2 percentage points per minute. As a result, longer breaks have about the same net loss of viewers as shorter ones. Sales houses can increase the length of advertising breaks without having to worry about an extra loss of viewers.\(^5\) A reduction in break length is useful only when it is important to keep the target group profile for the break constant.

Controversial or irritating commercials

In this study, no direct effect on switching behaviour from product sort or campaign overload was demonstrated. It appears to be possible to include a commercial for a controversial or irritating product and/or a frequently repeated commercial in a break, even at the start of an advertising break, without producing a direct increase in switching. Because of this, sales houses have greater flexibility in marketing the broadcasting time in advertising breaks. They can be lead by the needs and wishes of the advertisers, without the direct necessity of letting the contents of the break or the arrangement of the slots sold depend on the type of product or the number of times commercials have been repeated.

However, the findings in this study should not be taken as carte blanche for the unlimited broadcast of commercials considered irritating or annoying without regard for the possible consequences for switching behaviour. While no direct effect on switching was found for product type or campaign overload, this says nothing about possible effects of other commercial characteristics that were not included in the research, such as “likeability”. The study also did not examine possible indirect or delayed effects on switching behaviour. For example, while no direct effect was found related to campaign overload for specific products, the possibility that this overload will cause irritation and an aversion to advertising in general, leading to the avoidance of television advertising, cannot be ruled out. The suggestion that some general avoidance behaviour pattern exists is supported by the finding in this study that the loss of ratings from switching takes place mainly at the start of a break rather than in the middle or end. In general, when viewers switch away, they do so as soon as it is clear an advertising break is about to begin; their decision is not affected by the content of the break.

In determining the content of a break, sales houses need to act responsibly and keep irritating factors to a minimum. Failure to do so may not result in a loss of audience for the breaks directly involved, but may contribute to a general irritation with advertising and lead to increased avoidance of television advertising.

\(^5\) Here again, it is the case that the model on which the recommendations are based is valid only within the existing variation of the variables. Extrapolation beyond the normal values is meaningless.
7.2.3 Recommendations for media buyer and advertisers

It is debatable whether advertisers have a direct economic interest in a general reduction in switching during blocks of advertising. On the one hand, the cost of broadcasting time is based *grosso modo* on the audience attained. The loss of GRPs as a result of switching does not affect their costs. On the other hand, less switching during commercial breaks would make it easier for advertisers to reach their target audience.

For advertisers, the direct benefit from this study comes from an increased understanding of switching behaviour during commercial breaks on the part of media agencies, who purchase advertising time for the advertisers. In planning advertising campaigns, media agencies may select breaks on the basis of availability, cost and anticipated audience size of the target groups specified. For this they need reliable forecasts of the ratings, including the patterns of switching during the break.

This study has shown that considerable differences can exist between breaks in the extent of the inflow and outflow of viewers during a break. However, the results of this study can be used to determine the ratings of a break, once the ratings of the programmes surrounding the break have been forecast. In addition, this study also provides criteria for selecting breaks with a stable viewer profile. These are discussed in the next section.

**Stability of viewer profiles**

In purchasing broadcasting time, the challenge for media planners is to use all available information in selecting the optimal breaks for an advertising campaign. There are no hard and fast rules in the selection phase of advertising time purchasing, but the findings of this study can play a useful role in it. After an initial selection of breaks has been made, a further selection among breaks of similar characteristics can be made based on the expected stability of the viewer profile. Breaks without a stable viewer profile might pose a risk for planning a campaign, because large groups of viewers with specific demographics switching away from or in to the break can cause significant changes in the viewer profile, making target group planning within the break difficult.

Based on the findings of this study, the following criteria should be applied in selecting zap-proof breaks with a stable viewer profile. They are listed in order of the size of the effect of factor on switching during commercial breaks:

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59 In order to insure reaching the desired target group in breaks with unstable profiles, advertisers can purchase a guarantee of a "preferred position", a spot at the beginning or end of the break, but this is an expensive option.

60 This list includes only those characteristics for which the $\beta$-value for the decrease and increase in audience ratings is greater than 1.0.
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1. centre breaks;
2. breaks between programmes with the same age profile;
3. short breaks;
4. breaks not opposed by advertising breaks with large audiences on other channels;
5. breaks broadcast before 22.00 hrs.;
6. breaks with low ratings on the other channels;
7. breaks with a large market share;
8. breaks following children's programmes; no breaks preceding the news;
9. breaks following short programmes;
10. breaks with a high audience rating.

7.3 Suggestions for further research
As far as can be determined, the SPOT study of switching behaviour is unique in its design and breadth. No previous study in the Netherlands or elsewhere has researched the effects on switching behaviour of such a large number of variables in so many advertising breaks. A number of variables are included in this study whose effect on switching has not been previously investigated. In some instances, the variables have not been included in any previous research on television viewing behaviour.

Among these new variables, effects on switching were found for the audience size for commercials on other channels during a break, the audience size for programmes ending on other channels during the break and the discrepancy between the average age of the product target group for commercials in the break and the viewer profile for the programme directly following a break. It is recommended that these variables be incorporated in future research on switching behaviour, so that their effects can be further investigated.

There are also limits to this study, and should the opportunity arise to repeat this research in an expanded form, a number of additions and adaptations should be considered. Some of the recommendations made below were considered in the design of the present study, but were not adopted at the time because of practical considerations. In any future repeat of this research, the need to follow these recommendations will have to be weighed against the investment necessary to carry them out.

Definition of switching behaviour
In this study, switching behaviour was calculated per minute. It is possible, in theory, to do this on a per second basis. This would allow a more precise determination of the switching behaviour. In order to make use of this detailed level of measurement, however, the starting and ending times for breaks and programmes also be determined precisely to the second. This option is not available with the current CKO methodology. A further constraint on per second registration in the
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CKO is the 15 second persistence threshold. This produces a slight imprecision in measurement for series of rapid channel changes, so that some disturbances are inevitable in a per second registration of viewing behaviour (see section 4.5).

Furthermore, in defining the decrease in ratings, it is recommended to make a distinction between the decrease caused by viewers who switch away briefly but switch back during the break and that resulting from viewers who switch away and do not return.

Existing explanatory variables
Further differentiation should be considered in the definitions of a number of explanatory variables. In addition to the existing 24 categories of product brands, specific brands with controversial commercials (such as the feminine hygiene product brand Always) should be included separately.

In the current study, campaign overload was operationalised in various ways. However, reach analysis was not used to determine how often viewers of each commercial had seen that commercial before. The enormous number of calculations necessary to determine this prevented this operationalisation in the current study (see appendix 5, section 5.9). A more feasible recommendation involves splitting campaign overload among various product categories, to determine whether campaign overload for specific product types has an effect on switching.

A further recommendation concerns the placement of advertising breaks around programmes that, like news broadcasts, serve as anchor points for viewers. As a result of horizontal programming and daily broadcast schedules, these programmes, which include soaps, quiz programmes, magazine programmes and current affairs programmes, are fixed moments for switching to a particular channel for many viewers (see section 6.4.3). This type of programme should be included as a separate explanatory variable.

The explanatory variables dealing with the effects of the episodic structure of programmes should be adjusted to allow for a distinction to be made between centre breaks and end breaks (see section 6.4.3).

A number of unexpected results were found in the current study that could not be fully interpreted. For example, it is not clear why less switching away occurs after cultural programmes. Also, the effect on switching away of the placement of a break after programmes in the category "other", the higher levels of switching away resulting from longer periods of time between breaks and the lower level of switching in found in the age group 35-49 years of age cannot be directly accounted for (see section 6.4.4). Further research into these variables may well produce an explanation.

New explanatory variables
In addition to the refinement of existing variables, the set of explanatory variables
could be expanded to include a number of characteristics that could be relevant, but that were excluded from the current study for practical reasons. For instance, because of the absence of an adequate data source, creative aspects of commercials and related factors such as "likeability" were not included (see section 3.5.10), despite the expectation that audience appreciation of commercials would have an effect on switching during a break. Even more desirable would be the coupling of likeability with campaign overload, so that so-called commercial "wear out" could be included in the research design. It may be that viewers are less likely to switch away during an enjoyable advertisement, unless they have seen it too often.

A further recommendation involves the expansion of the set of personal characteristics. This research was carried out on historical data, but in any future repetition of the study, additional questions could be put to the television panel. In this way, for example, attitudes toward advertising in general (see section 3.4.11) could be elicited and included in the research design. Another characteristic not fully covered in the current study is the number of channels received per household. It could be possible, for example, to compare the evoked set of channels, the channels that viewers are aware of or watch regularly, with the actual total number of channels the household can receive.

As well as including additional individual characteristics, future research could include more diverse target group characteristics. In the current study, characteristics that appear to be significant for switching behavior, such as a break's audience rating and market share and the audience rating for other channels during the break, are only calculated for persons 6+. The explanatory power of the models might be increased if these variables were split among other relevant target groups. A further step would involve establishing a separate model for diverse target groups. Experimentation on a limited scale has shown that switching models for different age groups are likely to differ (Alders, 1997).

Data
A further recommendation is the adaptation of the level of analysis discussed in section 4.2, in which personal characteristics are directly combined with programming, so that each viewer per commercial break, minute or spot counts as a separate observation. Because of the length of the sample period chosen for this study (January through April 1995), this option would have resulted in an unmanageable number of observations. However, such an analysis could be carried out over a shorter period of time.

Statistical analysis
The research could also be expanded by incorporating other means of analysis of the existing data. In section 1.3 it was noted that the explanatory model in the current study can be seen as a first phase in accounting for switching behavior
Switching during commercial breaks and creating an inventory of possible relevant explanatory factors. In future studies, it is recommended that a structural causal model be defined, in which the relations among the explanatory variables, including all indirect effects, can be tested.