The Control of Commercials Targeting Children: An Experimental Approach to Investigate Context Effects

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ABSTRACT

This paper presents two experiments investigating the impact of the program preceding TV ads on the effectiveness of these ads targeted at children from eight to 12. The objective is to provide answers to Policy Makers in charge of the control of advertising aimed at children in Europe and more particularly to the restrictions recently imposed in the French-speaking part of Belgium. Theoretical explanations for program effects offer a framework for this research.

INTRODUCTION

In February 2001, during its presidency of the European Community, Sweden argued in favor of a complete ban on advertising targeting children in the European Community. Although the Swedish position did not meet with the other EU-members’ approval, in Belgium it triggered off new debates about the need to control advertising targeting children. This issue is not new and advertising restrictions have already been implemented in some European countries. Two types of restrictions exist: those that control ad content (for example: kids can only play a “passive role” in ads for sweets in Finland) and those that restrict ad placement (ban on ads during kids’ programs in Austria; ban on toys ads between 7 pm and 10 pm in Greece, etc.). In the Dutch-speaking part of Belgium, advertising was rapidly forbidden five minutes before and five minutes after children’s programs (the so-called “five minutes” rule). The French-speaking part of Belgium recently adopted the same measure. This raises a question: are such ad placement restrictions really efficient? If the objective of such measures is to avoid the possible confusion between an ad and the surrounding or the adjacent program (that may have very similar formats), it makes sense. However, from an ad effectiveness point of view, placement restrictions could be questioned. Indeed, is an advertisement more efficient if it appears during or around kids programs than family programs, as suggested by the “five minutes” rule (to the extent that kids watch also family programs)? Providing answers to these questions is the objective of this paper. Ad effectiveness will be measured in the context of different programs surrounding the ad. Moreover, different program-related variables (such as program-induced affect and program liking) will be used as well as measurement scales especially suited to the target population (children from eight to 12).

In the USA, this issue is not new. For years, various pressure groups have tried to control or even to impose a ban on ads for kids. However, such a ban has never been implemented (see for example the final report of the Federal Trade Commission in 1981, as well as numerous publications reporting FTC efforts to cope with various pressure groups). This provides good evidence that these issues are very complex and call for scientific studies.

BACKGROUND

Commercials never appear in isolation. They appear in context and this context can influence the reception of an embedded ad. This means that the context can affect how effective an ad will be. Various contexts could be investigated: the exposure or social context (being alone in the room or not; being at home or somewhere else, …); the channel selected; the TV program or segment of a program surrounding (preceding/following) the ads; the context created by the other ads in the block of commercials (Poncin 2003). In this research, we focus on the second type of context, i.e., the TV program surrounding the ads. According to Schumann and Thorson (1990; quoted by Murry, Lastovicka and Singh 1992), the surrounding program is a key determinant of ads’ effectiveness.

One traditional view is that commercials are more efficient if placed during or after a positive/happy program than during or after a program eliciting negative affective reactions (Kennedy 1971). This would be so because the affect induced by the program will be transferred to the ads. Such an assimilation effect means that a program eliciting positive affective reactions will lead to better ad evaluations than a program eliciting negative affective reactions. Goldberg and Gorn (1987) proposed a Mood-Congruency hypothesis to explain such effects (Bower 1981; Isen et al. 1978). According to this hypothesis, mood (or affect generated by the program) increases the accessibility in memory of information with the same valence, which would then bias ad evaluations. Nevertheless, contradictory findings were obtained such as the effectiveness of ads embedded in programs eliciting negative affect (Kamins, Marks, and Skinner 1991). Kamins et al. (1991) work suggests that people try to “maintain” positive affective states while they want to change negative affective states (“mood repair mechanisms”) (Isen 1984). Consequently, subjects exposed to programs generating negative affective reactions will focus on positive elements of the ads embedded in the program in order to remediate to this negative affective state, leading to increased ad effectiveness.1 In conclusion, the sometimes contradictory results observed suggest that other variables may be at play, either mediating or moderating program affect impact on ad evaluations.

One of these variables is program liking, a global evaluation of the program (Abelson et al. 1982; Schumann 1986) that when taken into consideration leads to understand why well-liked programs though eliciting “negative” affective reactions (i.e., sadness) can have a positive impact on the embedded ads. Schumann (1986) was among the first to show that ads placed in well-liked programs led to better evaluations of the products presented in these ads than when included in non-liked programs. Later, it was shown that program liking is positively related to Aad and mediates the effects of program-induced affect on ad evaluations (Coulter 1998). Actually, as stressed by Murry, Lastovicka and Singh (1992), two types of program responses can be considered: feelings and liking which both have to be studied if one wants to understand program effects on embedded ads.

Another interesting variable in this area of research is the similarity between the affective tone of the program and the affective tone of the ad. Happy commercials are evaluated more favorably in the context of a happy program while sad ads receive more favorable evaluations in the context of a sad program, in accordance with the Mood-Consistency hypothesis (Kamins et al. 1991).

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1This makes the assumption that ad effectiveness is solely dependent upon the level of cognitive processing of the ad, which is not always the case (for example when a peripheral processing of the message occurs).
Program involvement has often been proposed as a moderating variable (Anand and Sternthal 1992). As stressed by Nahon and Tassi (1998), program audience measures do not have any utility without knowledge of the viewers’ involvement levels. Different explanations have been proposed to deal with involvement. On one hand, one of the findings has been that greater involvement with the program leads to reduced processing and/or recall of ad information (Kennedy 1971; Soldow and Principe 1981). The explanation is that in high involvement, all cognitive capacities are devoted to the program preventing people from processing ads centrally and therefore decreasing their effectiveness. On the other hand, some have argued that subjects would be more susceptible to program effects in low involvement (Lord and Burnkrant 1988) because this low level of involvement will continue during the ads. However, both Schumann (1986) and Murry et al. (1992) found program effects in high involvement. According to Tavassoli, Shultz, and Fitzimons (1995), the explanation for these apparently contradictory findings is to be found in the inverted-U form of the program involvement-ad effectiveness relationship, moderate involvement levels being preferable to low and high levels.

Commercial involvement (i.e., motivation to process the ads) also moderates program effects (Coulter 1998; De Pelsmacker, Geuens, and Anckaert 2002; Murry et al. 1992; Petty, Cacioppo, and Schumann 1983). Higher levels of commercial involvement lead to higher motivation to process the ads, to pay more attention to the ads as well as to more in-depth treatment of these ads which makes difficult for the program to have an impact. When involvement in the ads is low, the program and its evaluation may serve as peripheral cues for persuasion. In addition, involvement in the ads and in particular its enduring dimension (i.e., the interest in the product category) moderates the importance of a congruency between ads style and their contexts (for example, a humorous ad in an humorous program, a “warm” ad in a “warm” program). Such congruency improves ad effectiveness for low involved subjects while high involved subjects are more persuaded by ads contrasting with their context (De Pelsmacker et al. 2002).

Involvement is sometimes defined as the subject’s arousal level. The role of arousal in program effects has been addressed by Broach, Page, and Wilson (1995). They showed assimilation effects in case of high arousal: better ad evaluations were obtained for liked programs than for disliked programs. However, a contrast effect was observed in the context of low arousing programs. Indeed, in that case, ad evaluations were less positive in well liked programs than in less liked ones.

Finally, the position of the ad in a pod is another important variable, program effects being more significant for the first ads in a string of commercials than for the last ads (Murry et al. 1992).

All pieces of research mentioned so far deal with adults and were achieved within a framework focused on cognitive processes that has been the mainstay of consumer behavior research. To our knowledge, very few pieces of research addressed these issues with children as subjects. There are a few exceptions however. One of these dates back to 1982 when Greer and his co-authors showed that the change from program to commercials was attention getting when the commercials contrasted with the format features of the program. More recently, Gunter et al. (2002) examined the effects of the surrounding program environment and level of involvement upon children’s memory for television ads. Investigating cartoon ads versus non-cartoon ads placed in either cartoon or non-cartoon programs, the authors showed overall better memory performances for cartoon advertisements than for non-cartoon ones. In addition, brand recognition was better for the ads placed in the cartoon programs. Interestingly, their results suggest a “contrast” effect between programs and ads. Indeed, the authors observed that unaided recall of non-cartoon ads was better when placed in the cartoon program while free-recall of cartoon advertisements was better when placed in the non-cartoon program. Regarding the measures of audience involvement, they did not show any impact on the dependent measures. Let us note that in an earlier study, these authors found better recalls of ads placed in a comedy than in a drama. Ratings of the program as “enjoyable” were negatively associated with product recognition and brand recognition while a rating of “interesting” was positively associated with free recall. A last piece of related research is provided by Prasad and Smith (1994) even though their objective was slightly different. Indeed, their research aimed at assessing the impact of violent programming on ad effectiveness. They showed lower scores of ad recognition and less favourable ad and brand attitudes when the commercial immediately followed a high-violence dramatic program segment than a low-violence program segment.

In conclusion, this literature review shows that several program-related variables could be investigated in this context. Due to the lack of research on this topic when kids populations are considered, we will of course have to make some selection among the variables of interest.

STUDY 1

Advertising Effectiveness Indicators

Classical constructs of ad effectiveness studies among adults (MacKenzie and Lutz 1989; Muehling and Laczniak 1992) and among children (Derbaix and Bree 1997; Moore-Shay and Lutz 2000; Phelps and Hoy 1996) are used: ad attitude (Aad); brand attitude (Ab); brand beliefs (Cb). Aad can be defined as “the evaluative judgement of an ad occurring during or immediately after exposure to this ad” (Derbaix 1995) while Ab refers to a “psychological tendency that is expressed by evaluating a brand with some degree of favor or disfavor” (adapted from Eagly and Chaiken 1993).

Program Variable

As stressed in the background section, the impact of program has been assessed in past research by different types of variables: program liking, program affect, thoughts about the program, etc. Given that affective reactions are ubiquitous when studying children’s reactions (Derbaix 1982; van Raaij 1986), program affect (i.e., the mood induced by the program) was selected. Research conducted among adults shows that program affect can be transferred to the evaluations of embedded commercials. This argument appears particularly relevant for children. Indeed, on the basis of the “How do I feel about it?” heuristic (Schwarz and Clore, 1988) we believe that children could use their affective state as an input in the ad evaluation process. According to this heuristic people may simplify evaluation tasks referring to their affective state at time of judgment. This view offers a shortcut particularly suited to children for whom the task at hand appears very often complex and for whom the use of a variety of attributes in the decision process has a low probability to occur. It has indeed been shown that children focus on cognitively less taxing executional features in the ads (Derbaix and Bree 1997; Pecheux 2001; Pecheux and Derbaix 2002).

Moderating Variable

To provide a more comprehensive understanding, a variable likely to moderate the relationships between program affect and
Hypotheses

H1: A program inducing positive affect leads to more positive ad and brand evaluations than a program inducing neutral affect.

In line with adult studies revealing a transfer of affect from the program to evaluations, we postulate a similar process among children. Indeed, we expect that the affect induced by the program will be transferred to the ad and therefore “color” the ad and brand evaluations (Gardner 1985). Thus this hypothesis suggests a main effect of program affect. This hypothesis could be justified by the Mood Misattribution theory as well.

H2: The Aad-Ab relationship is the strongest in case of positive affect and low felt involvement.

In this case, an interaction between program affect and felt involvement is expected. Given that affect effects have been shown to be stronger in case of low involvement (Batra and Stephens 1984; Curren and Harich 1994) than in high involvement and given that research on advertising effectiveness has shown that the Aad-Ab relationship is more significant in case of low involvement, we expect this relationship to be the strongest in case of low involvement and when a positive affect is generated by the program. Petty, Gliereher, and Baker (1991) showed that involvement interacted with affect (mood) to influence persuasion. In addition, research has shown that affect transfer is more likely to occur when this affect is positive (people trying to maintain their affective state) than when affect is negative (in that case, people try to “repair” their affective state) (Isen 1984).

Design and Manipulation

A two by two between-subjects design was used: two levels of felt involvement (high vs. low) and two types of affect (positive vs. neutral) induced by the program. To create two levels of felt involvement, specific instructions were used that consisted either in telling kids they would see ads and that questions about these ads would be asked which therefore makes possible a more cognitive processing of the ads.
TABLE 1
Aad Average Scores

<table>
<thead>
<tr>
<th></th>
<th>Neutral program affect</th>
<th>Positive program affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low felt involvement</td>
<td>12.41</td>
<td>16.56</td>
</tr>
<tr>
<td>High felt involvement</td>
<td>16.98</td>
<td>17.42</td>
</tr>
<tr>
<td></td>
<td><strong>14.69</strong></td>
<td><strong>16.99</strong></td>
</tr>
</tbody>
</table>

Significant main effect of program affect: $F(1, 177)=7.49; p=.007$

Significant main effect of felt involvement: $F(1, 177)=10.48; p=.001$

Significant interaction: $F(1, 177)=4.90; p=.028$

TABLE 2
Ab Average Scores

<table>
<thead>
<tr>
<th></th>
<th>Neutral program affect</th>
<th>Positive program affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low felt involvement</td>
<td>15.04</td>
<td>17.76</td>
</tr>
<tr>
<td>High felt involvement</td>
<td>18.74</td>
<td>18.21</td>
</tr>
<tr>
<td></td>
<td><strong>16.89</strong></td>
<td><strong>17.98</strong></td>
</tr>
</tbody>
</table>

No significant main effect of program affect: $F(1, 177)=1.62; p=.204$

Significant main effect of felt involvement: $F(1, 177)=5.92; p=.016$

Significant (« border line ») interaction: $F(1, 177)=3.62; p=.059$

FIGURE 1
Interaction Between Program Affect and Felt Involvement
Discussion, Limitations and Design of a New Study

The results of this first experiment tend to show an impact of program affect on ad evaluations, congruent with the predictions of the Mood Misattribution theory. However, this first study is not exempt from limitations and there may be some confounding variables to the impact of the program. Indeed, observations of the children during the data collection told us a somewhat different story. Actually, we clearly observed a contrast effect between the commercials when they interrupted the neutral mood inducing program (kids seemed to be “happy” the program was over). Such a contrast was not observed in the other condition (positive mood inducing program). We believe that in order to better understand the types of mechanisms underlying program effects, an improved design is needed. First of all the type of program variable used in this first study may be questioned. Program affect might not be the best variable to depict the child’s reaction to the program. In that respect, program liking or “the global reaction to the program” may be investigated as well (in our first study, these two variables may have been confounded). In addition, in the case of children, program liking may be strongly correlated with another variable: program involvement. Moreover, from a public policy point of view, the first study did not enable us to clearly consider different types of programs whose targets may be either the child or the family. A new study (study 2) is therefore proposed using two program variables: the liking of the program and the type of programs (regarding the target): family versus children programs. Considering the target of the program will be more in line with the actual public policy concerns.

STUDY 2

Advertising Effectiveness Indicators

Alike in study one, attitude toward the ad and brand attitude are used as advertising effectiveness indicators. The same multi-items measurement scales were administered. In addition, thought evoked by the advertisement were also recorded.6

Program Variables and Program Selection

Two program-related variables were used. The first one, “program liking”7 (Schumann 1986) is measured in this research by two items (dealing with to what extent children liked/enjoyed the program and to what extent they would like to watch it again). The second one is the target of the program: the child versus the family. After a pre-study, 8 3 programs were selected: the Simpsons (a program liked by kids, targeting kids); Star Academy (a program liked by kids, targeting the family); the News (a program non liked by kids targeting the family).9

Hypotheses

H1: There is no difference in terms of advertising effectiveness between an ad placed in a program targeting children and liked by children and the same ad placed in a program liked by children and targeting the family.

H2: An ad placed in a program non liked by kids will be more efficient than this ad placed in a liked program.

Based on Greer et al. (1982)’s results that changes from program to commercials is attention getting when commercials contrast with the “formal features” of the program and on the observations made during the first experiment, we propose that an ad placed in a program non liked by kids will be more efficient in comparison to when it is placed in a well-liked program. In a non-liked program, the ad will contrast with its context, attention will be increased and ad evaluations will be more positive (numerous previous research have shown a general positive attitude toward particular ads by children for whom ads are a “show”). If the context provides a level against which the ad is compared (i.e., contrasted with), a relatively neutral or even sad context may prove beneficial for evaluations of the ad. In addition, based on the strong Aad-Ab relationship highlighted in study 1, we could also predict the same effects on brand attitude. Let us stress that if this second hypothesis is supported by the data, this would strongly question the utility of the “five minutes” rule applied in Belgium.

Design and Manipulation

Three experimental groups and one control group were used in this experiment. Children were randomly assigned to one of the four groups. In the first three groups, children were exposed to one of the three programs followed by a string of commercials. The fourth group was a control group in which there was no program before the ads.

Stimuli, Procedure, Sample and Measures

In this research, the block of commercials was made of five ads in which the first ad the last ad were test ads. In this experiment two test ads were used10 (two different ads for two known brands belonging to the same product category: cereals). The objective was here to test program effects on the first ad following the program as well as on a further ad in the sequence (previous research has indeed shown a stronger impact of the program on ads placed earlier in the sequence).11

One hundred twenty-six11 children from eight to 12 participated to the experiment which took place in schools (children were interviewed one at a time in a small room equipped with a TV monitor). Upon arrival to the room, a mood measure was taken before children were told they would watch a TV program and that questions would be asked later (no mention of the ads was made in either of the groups). About 10 minutes of the program were broadcasted (except in the control group where no program was shown) followed by a string of commercial announced by a jingle. After the first ad, the TV was shut off to ask questions about thoughts generated by the ad and ad attitude. The TV was then shut on again and the commercial break resumed. The last ad of the sequence was the second test ad on which questions were immedi-

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6Such a measure would enable us to identify a possible confusion between programs and ads as well as provide a first evidence of message acceptance or rejection (Wright 1980).
7And “non weariness”.
8About 40 children interviewed concerning what they used to watch on TV and what they liked.
9Even though kids do not like “the News”, in many families kids are in the room with their parents when the News are broadcasted. Therefore, they are passively exposed to this program.
10The positions of the test ads in the sequence were of course counterbalanced: first and last.
11After removing incomplete questionnaires.
ately asked. Then the kids watched a second part of the program which was followed by questions about the program (program liking and prior exposure to this program) and brand attitude. The kids were then debriefed and thanked for their participation.

Results

Manipulation checks. First of all, checks were performed on the manipulated variables. The following table displays the results of the program liking measure (two items aggregated; Cronbach’s alpha= .86). As expected, the two liked programs have significantly higher scores than the non liked program while not differing among them (i.e., there is no difference in the evaluation of the two programs liked by children).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Beta (Stand)</th>
<th>B (Unstan.)</th>
<th>SE (t)</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low FL/Neutral P.A.</td>
<td>.481</td>
<td>.497</td>
<td>.137 (3.64)</td>
<td>.23</td>
</tr>
<tr>
<td>Low FL/Positive P.A.</td>
<td>.677</td>
<td>.700</td>
<td>.122 (5.75)</td>
<td>.46</td>
</tr>
<tr>
<td>High FL/Neutral P.A.</td>
<td>.712</td>
<td>.741</td>
<td>.104 (7.09)</td>
<td>.50</td>
</tr>
<tr>
<td>High FL/Positive P.A.</td>
<td>.707</td>
<td>.684</td>
<td>.107 (6.41)</td>
<td>.50</td>
</tr>
</tbody>
</table>

a means significant for p < .001
1F.I. refers to Felt Involvement; P.A. refers to Program Affect.

Test of the hypotheses. Before testing the hypotheses, it seems useful to show the mean scores obtained for the ad and brand evaluations in the different groups.

Hypothesis 1. Non different ad effectiveness scores were expected between the first two groups (the two groups who watched programs they liked before the ads). For the first ad, this hypothesis is supported by the data: 16.66 is not different from 16.66 (for Aad1); 21.54 not different from 19.19 (though the effect is borderline: \( p = .062 \)) (for Abp1). In order to provide a more compelling test of this hypothesis, we compared these two conditions with the control group. Indeed, the proof of no differences between the first two groups would be stronger if we show differences with the control group (not exposed to any program before the ads). These comparisons lead to conclusive results for Aad1 (\( p = .077 \)) but not for Abp1 (\( p = .54 \)). As far as the second ad is concerned, 18.00 is not different from 17.94 (\( p = .96 \)) (for Aad2) and 20.63 is not different from 21.47 (\( p = .54 \)) (for Abp2). However, the comparisons with the control group do not show the expected results (\( p = .96 \) for Aad2, \( p = .54 \) for Abp2).

In conclusion, the first hypothesis is supported by the data as far as ad attitude is concerned and for the first ad in the sequence (the results obtained for brand attitude as well as those observed for the second ad are not conclusive).

Hypothesis 2. In the second hypothesis, we anticipated a better ad effectiveness for ads placed in a program disliked by kids in
comparison with a program they liked. We will therefore compare each of the first two groups with the third one.

**Star Academy versus The News.** For the first ad, significant results are obtained for Aad1 \( (p=.075) \) while not for Abp1 (the results do not go in the expected direction). For the second ad, the result is borderline for Aad2 \( (p=.08) \) while non significant for Abp2 \( (p=.44) \) though in the expected direction.

**Simpsons versus The News.** For the first ad, the comparison for Aad1 is slightly significant \( (p=.068) \) but not for Abp1 \( (p=.100) \) though in the expected direction. The same pattern is obtained for the second ad: significant comparison for Aad2 \( (p=.034) \), non significant result for Abp2 \( (p=.30) \).

In conclusion, the results of the second hypothesis show that as far as the ad attitude is concerned, better scores are obtained for an ad placed in a program kids do not like than in programs they like. In addition, this conclusion holds both for the first and last ad in the sequence. If we compare these results with those of the first hypothesis, they clearly show that –contrary to what is often believed by the lay man- ads are not more efficient when placed in kids’ programs (the Simpsons, for instance) than in family programs (Star Academy).

**Discussion and Test of Assimilation and Contrast Hypotheses**

How can we explain these results? Why do we observe an increased effectiveness of an ad placed in a program kids do not like? What mechanisms underlie these results, which theory could be used to explain them? First, contrary to what is assumed by those arguing in favor of a ban of ads targeting kids after kids program,
there does not seem to be an assimilation effect of the program on the ad. Indeed such an assimilation explanation could have been proposed if the ad evaluations would have been more positive for the ads following liked programs than for ads in the control group. This is not the case (statistical tests are even not needed because the results do not go in the expected direction). A mood misattribution explanation is neither possible according to study 2’s results. In addition, the thoughts evoked by the first ad gave no evidence of a possible contamination of the program on the ad. Would a contrast hypothesis be the explanation? As in the first experiment, a contrast between programs and ads seems to have occurred while it is difficult to prove it. Statistical comparisons of ad evaluations in the control group versus the group exposed to the news do not provide significant results. Indeed, to prove a contrast effect, we would expect better ad evaluations after a non liked program than in a control group with no program preceding the ads. The results on that point are not significant.

These two investigations have obviously just scratched the surface of an enormous iceberg. Therefore, to be better able to conclude concerning the underlying mechanisms, we believe our design has to be improved once again. Indeed, to identify a contrast between programs and ads, we probably need an on-line measure (during programs and ads) of what kids “feel” while watching them. The development of such a measure is the next step of our research as well as the design of a third experiment which would better describe the processes and would more clearly be related to theoretical explanations.

REFERENCES


