INDUCING VALUE-CONGRUENT BEHAVIOR THROUGH ADVERTISING AND
THE MODERATING ROLE OF ATTITUDES TOWARD ADVERTISING

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Abstract

Advertisements frequently link values to advertised products or services, but little is known about the effect of this practice on value-driven behavior that is unrelated the advertising context. Evidence from two studies show that exposure to value-laden advertisements instigates behavior that is congruent with the ‘advertised’ value (i.e., self-direction, security, achievement or benevolence). Moreover, attitudes toward advertising moderate this effect. To the extent that people value positive aspects or dislike negative aspects of advertising, value-congruent behavior becomes respectively more or less likely following exposure to value-laden ads. The results highlight new aspects of unintended influences of exposure to advertising.
Marketers know that personal values play an important role in buying decisions. For example, an individual who defines himself as someone who is concerned about the environment will probably buy a different car than someone whose primary goal in life is to have fun and to enjoy him/her. In fact, according to the means-end theory (Gutman 1982), consumers contemplate how certain products may help them to attain their higher goals and values when facing a buying decision. Associative advertising, a strategy whereby advertisers incorporate values in their campaigns to create a product image (Reynolds and Gutman 1984), may therefore be an effective tool for marketers. The relative importance individuals attach to different personal values, however, is not confined to consumer decisions, but affects many everyday decisions and judgments. For instance, someone who thinks that being loyal to friends is more important than enjoying life will prefer staying at home to help his friend with his homework instead of going to a party that night.

Different situational variables can temporarily change the priority of values within an individual, thereby changing their behavior. The present paper focuses on exactly associative advertising as one such possible situational variable. In particular, the present research investigates whether exposure to value-laden advertising temporarily alters the importance of different values, thereby affecting value-driven behavior that does not involve the advertised product or service. In addition, we investigate whether the effect of ad exposure on shifts in value importance is moderated by one’s attitude toward advertising. In particular, we examine whether individuals with a predominantly negative view of advertising are equally affected by value-laden advertising than individuals with a predominantly positive view of advertising.

The Dynamic Hierarchical Structure of Values

When asked to describe themselves, people often refer to the values they hold as guiding principles in their lives – such as being concerned about the environment, being loyal to friends, or attaching great importance to academic achievements. Values are conceptions of
desirable end states, represent a core characteristic of a person’s self concept, and are experienced as what one finds important in one’s life (Feather 1990, 1995; Schwartz 1992; Schwartz and Bilsky 1987, 1990). Although ample research has focused on the relation between culture (e.g., collectivistic vs. individualistic cultures; Triandis 1995) and the relative importance of different values, we are interested in the relative importance of different values within individuals. Indeed, within a given culture, individuals may differ in how they rank different values in terms of their importance to the self (e.g., valuing academic achievement more than being loyal to friends). In a situation involving a trade-off between competing values (e.g., going to a party or staying at home to study), the relative importance of values guides the selection of an appropriate action.

To better understand the link between values and behavior, we need to approach values as motivational mental constructs. Every value functions as a mean to attain a higher abstract goal. This motivates people to live up to their values. Schwartz (1992) distinguishes 52 values which are almost universally shared and categorizes them in ten different types of higher motivational goals. For instance, freedom, creativity and independency are, among others, three values that serve the higher motivational goal of self-direction. These motivational goals or value types can then further be positioned along two orthogonal bipolar dimensions (see Figure 1). A first dimension ranges from openness to change (self-direction, stimulation and hedonism) to conservation (tradition, security and conformism) while a second dimension ranges from self-enhancement (achievement and power) to self-transcendence (universalism and benevolence). Values that are situated at one pole of a dimension (e.g., power and achievement) are thus congruent with each other because they serve the same motivational goal (e.g., social superiority and esteem). In contrast, values at opposite poles are incongruent with each other because they serve different motivational goals. For instance, power and achievement promote personal well-being while the opposing values
of universalism and benevolence promote shared well-being with others.

Contrary to the conventional view, which states that the ranking of values is relatively stable across situations (e.g., Rokeach 1973), the value system is more often seen as dynamic: The hierarchy of values may change depending on specific issues and situations. For instance, participants rank ordered values differently after they had to write an essay on abortion or on the environment than when they were simply asked to rank their values according to how important they were to them as guiding principles in their lives (Seligman and Katz 1996). Individuals also reordered the priority of relevant values when they were asked to give reasons for specific values (Maio and Olson 1998) or when they were primed with a value (Verplanken and Holland 2002). Such findings explain why people may not always act consistently in situations that involve similar value trade-offs: Situational factors may differentially activate specific values and thereby temporarily cause a shift in the hierarchy of value priorities.

Because value systems are considered to be mental structures, value systems are characterized by two important features. First, values have to be activated to exert influence on behavior (Hitlin and Piliavin 2004; Verplanken and Holland 2002). Second, the activation can be attained by the situational activation of mental constructs, called “priming” (Bargh, Chen, and Burrows 1996; Verplanken and Holland 2002). For example, past research examining “automaticity” processes in behavior has shown that goals can be activated without the conscious awareness of the participants and may have powerful effects on behavior. For example, participants who were primed with the Apple logo behaved more creatively afterwards compared to participants who were primed with the IBM logo (Fitzsimons, Chartrand, and Fitzsimons 2008). Also, priming interdependence versus dependence has differential effects on risk-taking (Mandel 2003) and on people’s worldview (Gardner,
The present research elaborates on these findings and explores whether advertising - a medium that often uses values to render advertised products or service appealing to certain consumer segments – may function as a situational cue which may activate values, and hence may lead to a temporary shift in their relative importance.

**Advertising as a Situational Cue**

Several studies suggest that advertising may activate specific values. In fact, researchers have used advertising images to prime cultural values or identity (Brumbaugh 2002; Forehand and Deshpandé 2001; Whittler and Spira 2002). Usually, such studies focus on the effect of values in ads on ad evaluation. A couple of exceptions have, however, investigated how values in ads may affect self-perceptions. For instance, Nairn and Berthon (2003) found that participants who viewed romantic advertisements rated themselves as more romantic (i.e., inspirational, creative, intuitive, imaginative) than participants who watched ads with a more classicistic character (i.e., straightforward, unadorned and unemotional). Also, Zhang (2009) showed that salient self-construal shifted toward independence or interdependence (measured by a sentence construction task) in response to exposure to individualistic versus collectivistic advertisements. Yet, neither study included behavioral measures.

Overall, the present research expands the existing results in two ways. First, if advertising really is capable of activating values, then there should be behavioral consequences that go beyond the advertising context. Because important individual values provide specific guidelines for behavior across different situations (Feather 1990), we expect that associative advertising can lead to general behavioral changes, even if that behavior has nothing to do with the product that is advertised. For example, when a consumer is exposed to advertising that sells computers as a means to attain independence, the value independence may gain in importance in the personal value system of that consumer leading to other
choices in later decision situations that have nothing to do with the advertised brand or the advertised product (e.g., shall I go and buy a sweater alone or with a friend?). Although we only test the short-term consequences of being exposed to advertising, the present research nevertheless contributes to the ongoing debate of unintended effects of advertising (Pollay 1986, 1987; Waide 1987; versus Holbrook 1987; Phillips 1997).

Second, the effect of value-laden advertising on the importance attached to the ‘advertised values’, may depend on how consumers view advertising. Indeed, advertising is the medium “we love to hate”: People may lament the manipulative character of advertising, but at the same time believe that advertising is good for the economy, that it is informative, and sometimes find it amusing (e.g., Bauer and Greyser 1968; Durvasula et al. 1993; Muehling 1987; Pollay and Mittal 1993; Sandage and Leckenby 1980). This difference in attitude toward advertising is important as consumers with more favorable attitudes toward advertising are persuaded more by advertisements (Mehta 2000). In a similar vein, we predict that individuals who hold a predominantly positive view of advertising are more readily affected by the ‘advertised values’ than participants with a predominantly negative view.

There are different reasons to predict that attitude toward advertising may have a strong influence on the magnitude of the priming effects of advertising on value-driven behavior. First, Aarts, Custers and Holland (2007) previously showed that the effect of goal priming may be eliminated when the goal was primed in the presence of negatively valenced information. They reasoned that “the initial interest in the goal dwindles if a ‘no-go signal’, so to speak, is delivered …” (Aarts, Custers, and Holland 2007, p. 175). A similar process may operate when consumers are primed with motivational values from a source they do not like (e.g., advertising for consumers with a negative attitude towards it). Second, according to the Flexible Correction Model (Wegener and Petty 1995) and other theories on mental contamination and mental correction (Wilson and Brekke 1994; Myers-Levy and Malaviya
people tend to correct their judgments when they (a) think they were influenced while making those judgments, (b) are motivated to correct for the bias and (c) are aware of the direction and the magnitude of the bias. We suggest that the attitude toward advertising may play a crucial role in whether or not individuals correct for the influence and how they correct for it.

Possibly, individuals who predominantly view advertising as informative will be less likely to detect or consider advertising as a “mental contamination” source (Wilson and Brekke 1994) than individuals who do not hold this view. In addition, they may be less motivated to correct for the presumed bias as value-laden advertising may signal to consumers how much importance their society attaches to these values. After all, given that ads are more persuasive when they appeal to the values of the audience (Nelson et al. 2006; Van Baaren and Ruivenkamp 2007), it makes sense that advertisers make use of values that are shared by as many consumers as possible. In sum, consumers who view advertising as informative may be less motivated to reduce the possible bias and therefore assimilate to the ‘advertised’ values.

Moreover, individuals who think of advertising as a highly manipulative institution may not only more readily engage in judgment correction processes, but also judge the presumed influence as more severe than those who do not hold this view. As a result, they may overcorrect the presumed influence, and, hence, may be more prone to contrast their behavior away from the ‘advertised’ values (cf. Lombardi, Higgins, and Bargh 1987; Newman and Uleman 1990). In addition, those individuals may engage in more pronounced counter-argumentation (i.e., come up with more thoughts that are inconsistent with the advertised message) than consumers who do not view advertising as manipulative (cf. Obermiller, Spangenberg, and MacLachlan 2005). As a result, individuals may devalue the importance of ‘advertised’ values.
Overview of the Present Studies

In two studies, we explore the possibility that value-laden advertising may activate the ‘advertised’ values and influence decisions that transcend the advertising context. To make sure that we used the full range of Schwartz’ circular model (Schwartz 1992), study 1 involved the openness to change vs. conservation dimension while study 2 involved the self-transcendence vs. self-enhancement dimension. For each pole of both dimensions, we selected a value that represented that pole (see Table 1 for an overview of the selected values and their definitions used in both studies). Specifically, in study 1, we exposed participants to ads that stress self-direction (related to openness to change) versus advertisements that stress security (related to conservation). In study 2, participants either saw advertisements featuring benevolence (related to self-transcendence) or advertisements featuring achievement (related to self-enhancement).

If advertising has the potential to activate the value type it communicates (i.e., self-direction, security, benevolence or achievement), then decisions following the exposure to those advertisements should be driven by those primed values and the motivational goals these values refer to (i.e., openness to change, conservation, self-transcendence or self-enhancement), even when the context is different from that of the advertisement. If, however, individuals have strong negative feelings toward advertising, they may feel motivated to undo the presumed influence. Hence, advertising may only activate values within individuals who have a predominantly positive attitude toward advertising. The moderating role of this individual difference will be tested in study 2.

STUDY 1

Overview of Hypotheses

In study 1, after the presentation of the value-laden ads, we confronted participants
with dilemma-situations in which they had to make a hypothetical choice between an ‘openness to change option’ or a ‘conservation option’. Because priming a specific value increases the activation of closely related values (Bardi et al. 2009; Maio et al. 2009; Pakizeh, Gebauer, and Maio 2007), we hypothesized that participants who had been exposed to advertisements communicating self-direction would be more inclined to choose options which are consistent with values that are closely related to self-direction. In other words, we expected that participants in the self-direction ads condition would more often choose an option that reflect the values of the openness to change pole (i.e., self-direction, stimulation and hedonism), compared to participants in the security ads condition. In a similar vein, we hypothesized that participants in the security ads condition would choose the ‘conservation options’ (i.e., security, conformity and tradition) more often than the participants in the self-direction ads condition. We did not expect an effect of exposure to self-direction (versus security) ads in dilemma situations that reflect universalism or benevolence versus achievement or power, as these values refer to an orthogonal motivational dimension.

Moreover, to test whether the value-changes are also apparent in real behavior, at the end of the experiment participants had to choose between two candy-bar. We manipulated the perceived popularity of the two candy-bars. Since choosing the unpopular or deviant option is a way to emphasize one’s uniqueness (Kim and Markus 1999) and a popular option is a safer choice when in doubt about the taste, participants in the self-direction ads condition should have a higher preference for the seemingly unpopular candy-bar (compared to the security ads condition).

Method

Participants. Ninety-four male and female undergraduates (60 women, 33 men, 1 missing gender, mean age = 20 years) at a Belgian university were invited to the lab to complete a series of unrelated experiments on a computer. They were all paid € 6 for
participation.

Procedure. Participants were told that they were participating in a series of unrelated experiments. First, each participant had to rate how well-designed ten print ads were. In the self-direction ads condition, all advertisements highlighted values which were related to the motivational type of self-direction (featuring slogans like “You are unique”, “Play your own game”, “Be free to do what you want”). In the security ads condition, participants saw advertisements that communicate security (featuring slogans like “Protect the things you care about”, “Tradition in security”, “High and safe”). Participants were randomly assigned to one of both conditions, but due to server malfunction the self-direction ads condition comprised more participants \((n = 55)\) than the security ads condition \((n = 39)\). After this rating task, participants engaged in several unrelated filler tasks, for approximately 5 minutes.

In the second part of the experiment, participants were presented with ten scenarios adopted from Feather (1995). The scenarios always consisted of a situation which was presented along with two choice-options (e.g., choosing between job A that offers a lot of security in employment but without much opportunity for freedom, independence, or creativity and job B with much opportunity for freedom, independence, or creativity but without security in employment). In five scenarios, participants were asked to choose between an ‘openness to change option’ (self-direction, stimulation, hedonism) and a ‘conservation option’ (tradition, conformity, security). Five other scenarios were filler tasks as they did not involve a choice on the target dimension. In one scenario, participants had to choose between two self-transcendence options; in four other scenarios, a choice was required between a self-enhancement option and a self-transcendence option.

At the end of the experiment, participants were told that we had candy left over from a previous experiment and that they were welcome to take one home. They could choose a candy-bar out of two different bowls filled with two different candy-bars (Bouchée or Twix
mini). Because one bowl always contained more empty wrappers than candy-bars, participants were given the impression that this candy-bar had been more popular in earlier sessions of the experiment. The other bowl contained more candy-bars than empty wrappers and was therefore more likely to be perceived as the unpopular option. A pretest was conducted to be sure that both candy-bars were both equally liked. We regularly changed the ‘perceived popularity’ of both candy-bars during the experiment.

Selection of ads. The selection of the print ads was based on a pretest. Ten undergraduates at a Belgian university rated 37 different existing print ads in terms of how strong the value of self-direction and security was highlighted in the advertisements (anchors 1 “No presence of self-direction” to 5 “Clear presence of self-direction”). All ads were in Dutch and originated from Belgium or The Netherlands. Participants received the operational definitions of Table 1 in order to have a better understanding of the different values. The ten ads with the highest scores on self-direction were used for the self-direction ads condition. The ten ads with the highest scores on security were used in the security ads condition. Both conditions differed significantly on the degree by which the ads communicated self-direction ($M_{\text{self-direction ads}} = 4.69$, $M_{\text{security ads}} = 1.70$; $F(1, 18) = 688.29$, $p < .001$) and security ($M_{\text{security ads}} = 3.17$, $M_{\text{self-direction ads}} = 1.77$; $F(1, 18) = 13.22$, $p < .01$).

Results

Across the five critical scenarios, we counted for each participant the number of choices that were congruent with the value “self-direction”. A one-way ANOVA revealed that participants in the self-direction ads condition indeed more often chose the option that was congruent with the value self-direction ($M = 2.58$, $SD = 1.18$) than participants in the security ads condition ($M = 1.69$, $SD = 1.10$): $F(1, 92) = 13.65$, $p < .001$. When gender was included in the analysis, the main effect of condition remained significant ($F(1, 89) = 9.54$, $p < .01$), and a main effect of gender emerged ($F(1, 89) = 5.99$, $p = .02$), indicating that men more
often chose the option that was congruent with the value self-direction ($M = 2.67$, $SD = 1.24$) than women did ($M = 1.95$, $SD = 1.16$). The interaction of gender and condition was not significant: $F(1, 89) = 0.05, p = .82$.

As hypothesized, we did not find an effect of the condition on the amount of chosen self-transcendence options ($F(1, 92) = 1.17, p = .28$) across the four scenarios in which a choice was required between a self-transcendence and a self-enhancement option. Also, for the scenario in which participants had to choose between two self-enhancement options, we did not find a significant difference between both conditions: $\chi^2(1) = .03, p = .86$.

These results indicate that participants’ scenario choices assimilate to the advertised values. When exposed to advertising that featured self-direction, participants were more likely to choose an option that reflected self-direction over a safe and traditional option. In addition, we found the same pattern of results when looking at actual behavior. Thirteen participants were excluded from the analysis (seven from the self-direction ads condition and six from the security ads condition) as they did not choose a candy bar because of dietary reasons. Since gender did not yield any significant results, the variable was not included in the analysis. A chi-square analysis revealed a significant relationship between the condition participants were in and the candy-bar participants chose: $\chi^2(1) = 3.89, p = .049$. Participants in the self-direction ads condition chose the unpopular candy-bar more often (64.6%) than the popular candy-bar (35.6%). In contrast, participants in the security ads condition preferred the popular candy-bar (57.6%) to the unpopular option (42.4%). Again, those results point to the inclination of less conformist (or more risk-taking) behavior after being exposed to self-directed advertising.

**Discussion**

Study 1 provided evidence for our hypothesis that value-laden advertising may serve as a situational cue to activate the advertised values and thereby influence value-based
behavior. As predicted, participants who had been exposed to advertising featuring self-direction, more often chose the option that was congruent with the value self-direction in a hypothetical dilemma situation than participants in the security ads condition. The result that participants in the self-direction ads condition more often chose an unpopular candy-bar than participants in the security ads condition shows that even a trivial choice can be influenced by the type of advertising people are exposed to. This result is particularly noteworthy in light of the fact that participants believed that the experiment was over at the time they made their choices and had no reason to believe that their snack choice was being monitored.

**STUDY 2**

**Overview of Hypotheses**

Study 2 extends the previous study in two ways. First, we wanted to generalize the findings obtained in study 1 by using ads featuring values referring to a different dimension than the values in study 1. In particular, we used the self-transcendence vs. self-enhancement dimension, resulting in a condition with ads highlighting benevolence and a condition with ads emphasizing achievement. To test whether associative advertisements cause a change in subsequent behavior we included two behavioral tasks involving achievement or benevolence. We hypothesized that participants in the achievement ads condition would persist longer on a difficult word-puzzle (compared to participants in the benevolence ads condition) as the ads made them attach greater importance to achieve something. The measure involving benevolence consisted of an information request following an invitation for blood donation. We predicted that participants who had been exposed to ads highlighting benevolence would be more interested in receiving information pertaining to a blood donation request (compared to participants in the achievement ads condition).

Second, we included consumers’ attitudes toward advertising to test the hypothesis that the effect of exposure to ‘advertised values’ may be moderated by attitudes toward
advertising. Considering that consumers may be ambivalent about advertising, we expected that attitudes toward advertising would consist of both a positive attitude (measuring the extent to which one values the positive aspects of advertising) and a negative attitude (measuring the extent to which one dislikes the negative aspects of advertising). We predicted that valuing the positive aspects of advertising would drive participants to engage in more value-consistent behavior: Longer persistence in the word-puzzle task in the achievement ads condition and higher probability to ask for information on blood donation in the benevolence ads condition. In contrast, we predicted that disliking the negative aspects of advertising would temper the value-consistent behavior: Reduced persistence in the word-puzzle task in the achievement ads condition and lower probability to ask information on blood donation in the benevolence ads condition.

Method

Participants. One hundred students from different faculties voluntarily participated in the study (54 women, 46 men, mean age = 21.2 years). One participant was omitted from the dataset because he failed to comply with the instructions.

Procedure. At the beginning of the study, participants filled out a questionnaire on their attitudes toward advertising (translated from Pollay and Mittal 1993). Upon completion, all participants engaged in a task where they had to rate five print advertisements on some characteristics (e.g., design, quality, colors, etc.). In the achievement ads condition ($n = 49$), all print ads communicated the value achievement (slogans like “Are you the next top manager?”,”For people with ambition”). The benevolence ads condition ($n = 50$) consisted of advertisements that were benevolence-laden (slogans like “Are you the next volunteer?”,”Because knowing the other is the only way to friendship”). After this rating task, participants engaged in several unrelated filler tasks, for approximately 5 minutes.

In the second part of the study, participants were shown a string of eight letters
of which they had to make as many words consisting of at least five letters as they could. There was no time limit and participants were told that they could stop whenever they wanted to. The time participants engaged in the task was registered.

At the end of the study, all participants were told that the Faculty of Medicine was looking for some volunteers to donate blood. Participants were asked whether they wanted to register in order to receive more information on blood donation.

**Selection of ads.** The selection of the print ads was based on a pretest and was similar to the pretest of study 1. In this study, however, we created fictitious ads because we lacked a sufficient number of real advertisements that clearly communicated benevolence. We created 28 print ads by manipulating the slogan that accompanied a picture. The ads were then rated by 10 undergraduates at a Belgian university in terms of how strong benevolence and achievement was present in the advertisements (1 “value not present” to 5 “value definitely present”). The five ads with the highest scores on benevolence were used for the benevolence ads condition. The five ads with the highest scores on achievement were used in the achievement ads condition. The two conditions differed significantly on the degree by which the ads communicated benevolence ($M_{\text{achievement ads}} = 2.08$, $M_{\text{benevolence ads}} = 4.44$; $F(1, 8) = 13.92, p < .001$) and achievement ($M_{\text{achievement ads}} = 4.40$, $M_{\text{benevolence ads}} = 2.48$; $F(1, 8) = 74.45, p < .001$).

**Results**

A principal component analysis with oblique rotation (oblimin) on the attitude towards advertising questions revealed two factors, based on the scree plot. The first factor consisted of items which measured to what extent participants perceived advertising as beneficial to the economy and as an important source of information (e.g., “Advertising helps raise our standard of living”, “Advertising tells me what people with life styles similar to mine are buying and using”). We will further refer to this factor as the valuation of the positive aspects
of advertising. The second factor measured to what extent participants perceived advertising as manipulative (e.g., “Advertising promotes undesirable values in our society”, “Advertising makes people buy unaffordable products just to show off”). This factor will be further referred to as the dislike of the negative aspects of advertising.

The fact that two factors were obtained indicates that the valuation of the positive and dislike of the negative aspects of advertising are not two opposite poles of the same dimension. In fact, the two factors correlate very modestly ($r = -.12, p = .22$). People may thus value advertising for its information and positive consequences for the economy, but at the same time dislike the manipulative character of advertising.

**Word puzzle.** First, we investigated whether participants in the achievement ads condition persisted longer in the word puzzle task than participants in the benevolence ads condition, and whether this influence was moderated by the attitude participants had toward advertising. Therefore, a one-way (advertising condition: achievement ads vs. benevolence ads) independent ANCOVA was conducted with the two factors of attitude toward advertising as covariates and the time participants worked on the word puzzle as dependent variable. The interaction of the advertising condition with each of the two attitude factors was also included in the model. One participant from the achievement ads condition worked for 40 min on the word puzzle task. We decided to omit this outlier from the analysis ($M = 10.90, SD = 6.07$; without this participant: $M = 10.60, SD = 5.33$). The effects of gender were tested, but because none of the results reached significance, we omitted this variable from the analyses.

In line with our hypothesis, participants in the achievement ads condition persisted significantly longer in the puzzle task ($M = 11.89, SE = .74$) than participants in the benevolence ads condition ($M = 9.32, SE = .72$), $F (1, 92) = 6.25, p = .01$. Moreover, as can be seen in Figure 2 (left panel), the valuation of the *positive* aspects of advertising moderated the effect of condition on the time spent on the puzzle task, $F (1, 92) = 4.48, p = .04$. The
more participants perceived advertising as informative and beneficial to the economy, the longer they persisted in the word puzzle task after exposure to ads highlighting achievement ($B = 1.69$, $SE = .71$, $t = 2.36$, $p = .02$), but not after exposure to ads highlighting benevolence ($B = -0.51$, $SE = .76$, $t = -0.68$, $p = .50$).

Contrary to our expectations, the dislike of the negative aspects of advertising did not moderate the effect of the advertising condition on the time participants persisted in the word puzzle task (Figure 2, right panel), $F (1, 92) = 0.64, p = .43$.

Finally, neither of the two attitude toward advertising factors had an overall effect on the time participants persisted in the puzzle task (dislike of the negative aspects of advertising: $F (1, 92) = 0.78, p = .38$, valuation of the positive aspects of advertising: $F (1, 92) = 1.28, p = .26$).

**Blood donation.** A chi-square analysis revealed that participants in the benevolence ads condition were significantly more willing to put their names on the list in order to receive information on blood donation than participants in the achievement ads condition were. In the achievement ads condition, only 16.3% of the participants was interested in blood donation, whereas this percentage was 64% in the benevolence ads condition ($\chi^2 (1) = 23.36, p < .001$).

To explore whether the attitude toward advertising factors moderated this relationship, we conducted a logistic regression with the advertising condition and the two factors of attitude toward advertising as predictors of the blood donation measure, as well as the interaction of advertising condition with each of the two factors. The advertising condition remained a significant predictor ($B = -2.46$, $SE = .56$, Wald $\chi^2 (1) = 19.31, p < .001$). The effects of gender were tested, but because none of the results reached significance, we omitted this variable from the analyses.

The valuation of the positive aspects of advertising significantly moderated the impact
of the advertising condition on interest in blood donation ($B = -1.54$, SE = .56, Wald $\chi^2 (1) = 7.54, p < .01$). As can be seen in Figure 3 (left panel), a stronger valuation of the positive aspects of advertising led to a significantly higher probability of being interested in blood donation for participants in the benevolence ads condition ($B = .85$, SE = .40, Wald $\chi^2 (1) = 4.61, p = .03$), but not for participants in the achievement ads condition ($B = -0.69$, SE = .40, Wald $\chi^2 (1) = 3.02, p = .08$).

The interaction of the dislike of the negative aspects of advertising and the advertising condition on the interest in blood donation almost reached significance ($B = 1.16$, SE = .61, Wald $\chi^2 (1) = 3.64, p = .06$). Figure 3 (right panel) shows that a stronger dislike of the negative aspects of advertising leads to a smaller probability of being interested in blood donation for participants in the benevolence ads condition ($B = -1.40$, SE = .50, Wald $\chi^2 (1) = 7.82, p < .01$), but not for participants in the achievement ads condition ($B = -0.24$, SE = .34, Wald $\chi^2 (1) = 0.48, p = .49$).

Finally, overall, there was no significant effect of the valuation of the positive aspects of advertising on blood donation ($B = 0.08$, SE = .28, Wald $\chi^2 (1) = 0.08, p = .77$), while a stronger dislike of the negative aspects of advertising was associated to less interest in blood donation ($B = -0.82$, SE = .31, Wald $\chi^2 (1) = 7.25, p < .01$).

Discussion

In study 2, we replicated the finding that value-laden advertising affects value-relevant behaviour for a different value dimension than the dimension used in Study 1. Participants were more achievement-oriented after being exposed to ads that stressed achievement as they worked longer on a difficult word puzzle task. They were also more interested in information on blood donation after seeing ads featuring benevolence. This result is a strong validation of our hypothesis that associative advertising can influence value-expressive behavior even
when these behaviors do not involve the advertised products or services. As hypothesized, attitudes toward advertising moderate the effects of associative advertising on value-relevant behavior. In both the benevolence ads and the achievement ads conditions, we found that participants who strongly value the positive aspects of advertising show assimilation effects. For participants who strongly dislike the negative aspects of advertising, we obtained contrast effects in the benevolence ads condition. However, contrary to our expectations, participants who dislike the negative aspects of advertising did not persist less in the puzzle task after exposure to associative advertising involving achievement.

A first tentative explanation for this unexpected result involves the acceptance of the use of achievement in advertising. It is possible that consumers with negative attitudes toward advertising accept and are used to advertising in which advertisers link a product to achievement but they may more readily disapprove of the use of benevolence as a frame to sell products or services. In other words, even consumers who strongly dislike the negative aspects of advertising may not object to the use of certain values in advertising and, consequently, may not correct their judgments regarding those values.

Drawing on the distinction between implicit and self-attributed motives (McClelland, Koestner, and Weinberger 1989), another explanation may be advanced for why participants did not show value-incongruent behavior on the puzzle task when disapproving the negative attributes of advertising. An implicit motive is seen as the drive that energizes, directs and selects behavior, because of the pleasure derived from the activity itself. Self-attributed motives, on the other hand, are more conscious articulations of the motives people may have, and are expressed when directly asked for. Hence, implicit motives predict spontaneous behavioral trends over time, while self-attributed motives only predict immediate choice behavior when social incentives such as rewards, prompts, expectations or demands are present. According to Verplanken and Holland (2002), values may thus “serve motives
implied by the immediate situation or more implicit motives” (p. 444). More important for our research is that, once activated, implicit motives are independent of cognitions or affect such as attitudes toward advertising while self-attributed motives are not. This means that if the primed value serves to activate implicit motives, the subsequent behavior will be value-congruent, irrespective of the participants’ attitudes toward advertising.

In an unpublished survey, we asked college students to indicate on a 7-point scale how important the different values were for them in their lives (ranging from 1 to 7). Benevolence had the highest score ($M = 5.81, SD = 1.18$), which is compatible with the idea that participants in study 2 have high self-attributed benevolence motives, leading to moderation effects of attitudes toward advertising. The importance attached to achievement, however, was situated around the midpoint ($M = 4.43, SD = 1.04$), pointing at lower self-attributed achievement motives. Given that the sample in study 2 also consisted of college students, achievement may have been an implicit drive for most of the participants. If so, exposure to achievement ads may have activated the implicit achievement motive, resulting in longer persistence times on the puzzle task, irrespective of how negative one is about advertising. While viewing achievement as an implicit rather than as a self-attributed motive may explain the lack of moderation by negative attitude toward advertising in the achievement condition, it does not explain why we did find moderation by positive attitude toward advertising in that condition. However, if participants with a strong implicit achievement motive also have a strong positive attitude toward advertising, this confound may exhibit itself as a moderation of positive attitudes toward advertising. Although it is intuitive appealing idea, we do not have the data to support this suggestion and hope to test this in future research.

One could argue that it is hard to attribute our results to either contrast effects or to assimilation effects in the absence of a proper control condition. It should be noted, however, that the specific interactions with the two attitudes toward advertising factors do allow an
interpretation in terms of contrast and assimilation effects. In a sense, participants who score low on a given attitude factor may be considered ‘controls’ for participants who score high on that attitude factor. The fact that, within a given condition, participants behave more in accordance with the advertised value as they more strongly value the positive aspects of advertising is indicative of an assimilation effect. In similar vein, the fact that, within a given condition, participants behave less in accordance with the advertised value as they more strongly dislike the negative aspects of advertising is indicative of a contrast effect.

When looking at the moderation effect for both the positive and negative aspects of advertising, two things are noteworthy. First, dislike of the negative and valuation of the positive aspects of advertising are not two opposite poles of the same dimension. Rather, they form two separate dimensions, on which consumers can score low on both – implying indifference toward advertising – or high on both – implying ambivalence toward advertising. Second, the fact that both factors moderate the effect of associative advertising points towards different mechanisms. In line with the Flexible Correction Model (Wegener and Petty 1995), we already raised the possibility that the valuation of positive aspects of advertising may reduce both the tendency to perceive advertisements as a source of “mental contamination” (Wilson and Brekke 1994) and the motivation to correct for the bias. The dislike of the negative aspects of advertising may enhance the motivation to engage in bias correction, or may lead to more pronounced counter-argumentation when watching the advertisement. At this point, however, we only can speculate about the exact mechanisms that come into play. It may also be, for example, that individuals who strongly value the positive aspects of advertising may simply look longer at ads, pay more attention to advertisements or engage in more pro-argumentation (i.e., come up with arguments that support the advertised message) than individuals who do not value the positive aspects of advertising that much. Longer exposure times may enhance the chance of being influenced by the value communicated by
the ad and, consequently, may explain why participants who strongly value the positive aspects of advertising assimilate more to an advertised value than participants who value the positive aspects less. Although the focus of the current paper was not to disentangle the process of the moderation effect, we think it is very interesting to assess this question in future research.

**GENERAL DISCUSSION**

The present studies demonstrated that value-laden advertising may affect the behavior of those who are exposed to it. In Study 1, participants chose the self-direction option more, both in hypothetical scenarios and in a real candy choice task after exposure to ads featuring self-direction than after exposure to ads featuring security. In study 2, participants persisted longer in a puzzle task after exposure to ads featuring achievement than after exposure to ads featuring benevolence. Conversely, participants indicated more interest in blood donation after exposure to ads featuring benevolence than after exposure to ads featuring achievement. In addition, Study 2 showed that the attitude toward advertising moderates the effect of exposure to ‘advertised values’. Participants assimilated to the advertised values if they thought of advertising as informational and beneficial to the economy and contrasted away from the advertised values if they considered advertising as a manipulative institution. It should be noted, however, that the average participant in both studies showed an assimilation effect. In Study 1, we did not take attitudes toward advertising into account but observed an assimilation effect across our sample. In study 2, we observed an overall assimilation effect after controlling for attitudes toward advertising. Advertising can thus act as a situational cue that may temporarily affect value-driven behavior, albeit more so when one thinks of advertising as a source of information and consider it beneficial for the economy.

Even though we demonstrated consistent results for our proposition, there are some possible limitations to the findings, some questions that still need to be answered, and some
interesting avenues for future research. First, the artificial setting in which the participants were exposed to the advertisements and the fact that the attitudes toward advertising were measured before the exposure to the ads are two limitations of the studies that deserve more attention in future research. It would be interesting to investigate the effects of values in ads in a more natural setting where participants may be less aware of the exposure to advertising.

Second, in our studies only four values were used, leaving the possibility that we will not find the same results with advertising that incorporates other values, such as power, universalism, hedonism or stimulation. Although in the present studies we did not ask to rank-order the values in terms of importance, we may infer from the unpublished survey with Belgian college-students that benevolence, self-direction and achievement are values that are important for college-students as the all scored above the midpoint of the scale. This brings us to the question whether our results can also be generalized to ‘advertised values’ that are less central to the individual. Indeed, previous research on goal-priming show that priming individuals with goals they do not already possess will not result in goal-directed behavior (Bargh 2002; Strahan, Spencer, and Zanna 2002; Karremans, Stroebe, and Claus 2006; Aarts and Chartrand 2005). Similarly, Verplanken and Holland (2002) found that value priming only works if the values are already part of the individual’s self-identity. Security is shown to be a less central value to the participants, and did instigate more security-driven behavior in Study 1. However, due to a lack of a proper control condition, we can not be certain that the difference between the security condition and the self-direction condition was due to participants attaching more importance in security values, or to a shift in importance of self-direction. Future research is thus needed to investigate whether individuals may simply ignore or reject advertising that incorporates values that are not important to them or whether advertising can also temporarily increase the importance of less central values. If the later is true, associative advertising may be more powerful than just appealing to an audience that
already feels strongly about the advertised value: It may simply make the value more important and consequently make the product (which is a means to live up to that value) more appealing to a larger audience.

The results of our studies expand the already existing literature on the unintended effects of advertising. For instance, many studies have shown that exposure to thin models may adversely affect consumers’ (body) esteem (Richins 1991; Smeesters, Mussweiler, and Mandel 2010). However, none of those studies have investigated whether attitude toward advertising may moderate these effects. Possibly, the adverse effects of advertising on self-esteem and other variables may be more pronounced among consumers who strongly value the positive effects of advertising and be mitigated among consumers who dislike the negative effects of advertising. Although the current paper does not address this possibility directly, the results of study 2 suggest that possible moderating effects of the attitude toward advertising deserve more attention in future research on unintended advertising effects.

Although both studies only involve short-term effects, we believe that the present findings can contribute to the debate as to whether advertising can mold cultural values in the long run. Considering the results of the present article, one may indeed wonder what the impact of advertising on values could be in the long run. First, it has been shown that frequent exposure to concepts may lead to chronic accessibility of those concepts (see Higgins 1996 for an overview of effects from frequent exposure). The same may hold true for frequently primed values. Second, the present research shows that there is at least a temporary change in one’s behavior after exposure to value-laden advertising. Because values can be derived from past experiences (Higgins 2007), individuals may infer from their own behavior that they attach great importance to the advertised value considering that they have behaved accordingly. Consistent short-term behavioral changes may thus lead to a long-term increase in the importance of the advertised value through a process of self-perception.
The idea that advertising may have long-term unintended effects is reminiscent of cultivation theory (e.g., Gerbner et al. 2002). This theory claims that the reality depicted in the media is a distorted version of the objective reality, and that this distorted view of reality affects people’s beliefs (first-order cultivation) and people’s attitudes and values (second-order cultivation). Research on cultivation theory, however, typically focuses on the ‘programs between the ads’ (Shrum 1999) rather than on the ads themselves. The fact that the attitudes toward advertising moderate the short-term effects of value-laden advertising shows that advertising may be processed differently than TV programs, thereby underlining the need to distinguish cultivation effects resulting from ad-exposure from cultivation effects resulting from TV programs.

Taken together, these studies contribute to the literature on the unintended effects of advertising in two respects. First, they show that associative advertising may affect consumers’ values. Second, Study 2 suggests that the extent of advertising effects may depend on one’s attitude toward advertising. Given that the audiences are becoming increasingly skeptical towards advertising, this last finding generates new avenues for future research. In any event, once again, advertising proves to be a powerful institution with far-reaching consequences for all those who are frequently exposed to it.
<table>
<thead>
<tr>
<th>Study 1: Poles</th>
<th>Study 1: Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to change</td>
<td>Self-direction</td>
</tr>
<tr>
<td>(includes: self-direction, stimulation, hedonism)</td>
<td>Independent thought and action-choosing, creating, exploring (e.g., freedom, self-respect, independent, choosing own goals, creativity, curious)</td>
</tr>
<tr>
<td>Conservation</td>
<td>Security</td>
</tr>
<tr>
<td>(includes: security, conformity, tradition)</td>
<td>Safety, harmony and stability of society, relationships, and the self (e.g., healthy, national security, social order, reciprocation of favors, family security, cleanliness, sense of belonging)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study 2: Poles</th>
<th>Study 2: Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-enhancement</td>
<td>Achievement</td>
</tr>
<tr>
<td>(includes: achievement, power)</td>
<td>Personal success through demonstrating competence according to social standards (e.g., successful, capable, intelligent, ambitious, influential)</td>
</tr>
<tr>
<td>Self-transcendence</td>
<td>Benevolence</td>
</tr>
<tr>
<td>(includes: benevolence, universalism)</td>
<td>Preservation and enhancement of the welfare of people with whom one is in frequent personal contact (e.g., helpful, honest, forgiving, true friendship, meaning in life, loyal, mature love, responsible, spiritual life)</td>
</tr>
</tbody>
</table>
FIGURE 1
FIGURE 2
The Predicted Time Spent in Puzzle Task as a Function of Priming Condition and the Focus on Positive Features of Advertising (left panel) and the Focus on Negative Features of Advertising (right panel).
FIGURE 3

The Predicted Probability of Being Interested in Information on Blood Donation as a Function of Priming Condition and the Focus on Positive Features of Advertising (left panel) and the Focus on Negative Features of Advertising (right panel).
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