

# Whatever people say I am, that's what I am: Social labeling as a social marketing tool

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## Abstract

In this paper, we present a procedure to apply the social labeling technique as a social marketing tool. Four studies indicate that communicating a social label, following an environmentally friendly behavior that is not motivated by pro-environmental concerns, leads consumers to re-attribute that behavior as representing their own environmental concern. Subsequently, they are likely to act upon their resulting self-perception as an environmentally friendly person. Social labeling is more successful when cognitive resources are distracted, either at the moment of processing the label or at the moment of making decisions related to the content of the label.

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Several researchers have identified the decision of whether to behave pro-environmentally as a social dilemma (e.g., Cialdini, Reno, & Kallgren, 1990; Wiener & Doescher, 1991). Choosing to conserve the environment is considered to be pro-social because it serves the long-term interests of society. On the other hand, behavioral costs associated with this type of action, such as money, time, effort, and inconvenience (Pieters, Bijmolt, van Raaij, & de Kruijk, 1998; Thøgersen, 1994), tempt individuals to make selfish choices. The challenge of social marketers is to persuade individuals to act for the benefit of society. In the social marketing tradition, the strategies chosen for this aim typically rely on the assumption that it is necessary to provoke active contemplation of behavioral alternatives (Andreasen, 1995). For example, Wiener and Doescher (1991) propose that consumers need to be convinced that the collective goal is worth pursuing and that it is likely to materialize. Further, they claim that social marketers should emphasize the importance of each individual's contribution. However, the traditional social marketing approach has not always met with success. We propose a complementary strategy that consists of subtly activating the right

(environmental) values and goals at the appropriate time. We present the social labeling technique, which builds on this principle, as a promising method for promoting pro-environmental conduct. In four studies, we tested the possibilities and scope of this procedure.

## 1. The traditional social marketing approach

Social marketing efforts typically rely on the assumption that it is essential to provoke active contemplation of behavioral alternatives (Andreasen, 1995). Therefore they often rely on educational and information-based strategies. Informative, argument-based pro-environmental messages are essential tools to educate and sensitize a target audience on important issues. However, caution is required, as research documents several mechanisms through which these messages might miss their aim or even backfire, such as psychological reactance (Brehm & Brehm, 1981; Reich & Robertson, 1979), fear control (Witte & Allen, 2000), descriptive norm meta-messages implied in social marketing communication (Cialdini, 2003), or consumers solving elicited cognitive dissonance by altering their attitudes rather than their behavior (Albarracín & McNatt, 2005). Making people think about why they *should* act

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ecologically is likely to make them think about why they *should not* as well (Warlop, Smeesters, & Vanden Abeele, 2003, p. 205). Making people think about the public benefits of an action is likely to make them consider the private costs of the same behavior (Albarracín & Wyer, 2001). Additionally, this could also lead to thinking about the private benefits of alternatives. As private costs and benefits are usually more salient than public costs and benefits (Rothschild, 1979), such a deliberation process is likely to end with an individual choosing the selfish option (i.e., the non-environmentally friendly behavior).

## 2. Values versus behavior

Because of the aforementioned reasons, promoting pro-environmental (consumer) *behavior* has proven to be a tough task. Notwithstanding, social marketers have been successful at creating awareness of environmental problems, and many people have adopted ecological preservation values (EC, 2005). Thus, a value–behavior gap has developed (Kollmuss & Agyeman, 2002). It seems that traditional social marketing actions may benefit from a complementary strategy, one that helps translate these acquired values into preservation behavior.

Many consumer choices are executed as part of a continuous stream of behaviors that are executed fairly automatically, based on minimal informational input (Alba, Hutchinson, & Lynch, 1991; Warlop et al., 2003). We consider low-involvement choices with an environmental impact to be no exception. In a decision situation, the value that is temporarily most salient and perceived to be most relevant determines the behavioral choice. Construal level theory (Trope & Liberman, 2000) predicts that positive beliefs about a goal or value are more readily accessible in long-term decisions, whereas negative beliefs related to that goal (e.g., the difficulty to obtain it) predominate in short-term decisions. When challenged to contemplate the environmental impact of behavior alternatives by social marketing messages, one thinks about future behavior in an abstract way. In this case, positive beliefs related to conservation behavior are likely to be salient. This may lead to making personal resolutions to act upon this value in the future. However, in the here and now of making a decision, the benefits of a concrete, lower-order goal that serves self-interest are likely to be more salient than those of a higher-order preservation goal. In a heuristic decision process based on minimal information input, these proximal and salient personal consequences are more likely to be spontaneously at the top of one's mind. A complementary social marketing approach could then consist of *making relevant (pro-environmental) thoughts more accessible at the moment of decision making* (Huffman, Ratneshwar, & Mick, 2003). We will test the potential of the social labeling technique for this aim.

## 3. Social labeling

Social labeling is a persuasion technique that consists of providing a person with a statement about his or her personality or values (i.e., the social label) in an attempt to provoke behavior that is consistent with the label. The technique is believed to rely on a self-perception process and the fact that one's (interpreta-

tion of) past behavior guides future action (Albarracín & McNatt, 2005; Burger & Caldwell, 2003; Ouellette & Wood, 1998; Tybout & Yalch, 1980). According to Bem's (1972) self-perception theory, people get to know themselves much like they develop a perception of the values and traits of others: by observing behavior and attributing it to either internal or external influences. When they "see" themselves engaging in a certain activity in the absence of any apparent external reasons, such as incentives or social pressure, that behavior is attributed internally. It informs the individual about his or her personality traits and values. Previous research showed that social labels, provided by others, can be an important source of information about an individual's traits and values and can guide future decisions (Strenta & DeJong, 1981). Because people prefer their actions to be consistent with their self-perceptions (Wells & Iyengar, 2005), we suggest that activating consumers' self-perceptions as environmentally friendly people should promote pro-environmental decision making.

An early example of the effect of social labels is offered by Miller, Brickman and Bolen (1975). Describing a group of fifth-graders as tidy was more efficient in making them keep their classroom free of litter than an explicit plea for tidiness. Similarly, Allen (1982) showed that labeling a certain social group ("American consumers are willing participants in solving the energy problem") in television commercials increases these people's intentions to engage in energy-efficient consumption relative to a persuasive appeal. Labeling has been shown to be especially effective when (1) it follows recent behavioral evidence, as people seek confirmation for their attributions before changing their attitudes (Scott & Yalch, 1980), and (2) it is consistent with the initial self-schema of the target (Tybout & Yalch, 1980).

## 4. Re-attributing previous behavior

Previous demonstrations of the labeling technique, in which the label followed a manipulated behavior, were mostly extensions of the foot-in-the-door procedure (Freedman & Fraser, 1966). After a first, modest request for help, targets who were labeled as helpful showed more compliance with a second, larger request for help than those who did not receive such a label (Gorassini & Olson, 1995). The most salient interpretation of compliance with a request in a typical foot-in-the-door situation is pro-social, which facilitates the attribution of the behavior to a pro-social self-concept. The label reduces the likelihood that the behavior is attributed to other causes (e.g., social pressure). In our case, however, the most salient interpretation of the target behavior is different from the label that is used to describe it. The social label proposes a *re-attribution* of subtly induced or *spontaneous* behavior (Snyder & Uranowitz, 1978). As there is no need for the first phase behavior to be an obvious example of a label-consistent behavior, the social labeling technique promises to have a much broader scope than traditional foot-in-the-door techniques for several reasons.

First, it allows the social marketer to exploit those situations in which a consumer spontaneously engages in pro-environmental behavior for reasons other than ecological concern. For example,

some people might decide to use public transportation in order to avoid the trouble of finding a parking space, because it is cheap, because their car broke down, because it conveniently drops them off close to their destination, or for many other reasons. Placing a sign in the bus that describes, and thus labels, the passengers as “responsible citizens choosing an environmentally friendly means of transport” might result in them perceiving their choice as an environmentally friendly act rather than an economically rational or convenient option and, hence, in perceiving themselves to be concerned with the environment.

Second, one can subtly induce consumers to perform a certain pro-environmental act by means of external motivation. This could be the purchase of an environmentally friendly variety of a product, like bio-products or propellant-free deodorant. The external motivation, which is the actual cause of the purchase, may be a price promotion, an attractive odor, or an attractive package. Subsequently, a social label is provided which attributes the purchase to the consumers’ environmental values rather than to the external motivation. For example, one could print a message on the packaging (e.g., “[brand X] — For those who care about their environment”). This procedure conveniently allows the repeated exposure of the label to the consumer each time he or she uses the product. The label invites a consumer who engaged in a pro-environmental act for an alternative motivation – like financial concerns or the preference for another intrinsic product quality – to re-attribute that behavior to their value of caring for the environment.

## 5. Distraction effects

Consumers who are aware of the actual determinants of their behavior might realize the label is some sort of manipulation attempt and reject its content (Burger, 1999). In order to maximize the probability that the target accepts and acts upon the label, it should be communicated in such a way that it minimizes activation of persuasion knowledge (Friestad & Wright, 1994) and elaboration on the content of the label. In the case that information processing is constrained because people are under a cognitive load, under time pressure, or distracted, it is harder to engage in such reflection (Baron, Baron, & Miller, 1973; Gilbert, Krull, & Malone, 1990). This implies that social labeling messages may have more impact when they are accompanied by some form of distraction (Bither, 1972; Kumkale & Albarracín, 2004). Campbell and Kirmani (2000) observed that when their participants were cognitively “busy” (i.e., when they had to perform other simultaneous and cognitively demanding tasks), they were more prone to judge a salesperson giving a promotional talk as sincere and thus be sensitive to his arguments. This effect even holds when the ulterior (persuasive) motive of the salesperson is highly salient (Bosmans & Warlop, 2005). This suggests that if cognitive resources are limited or directed elsewhere when the target receives the social label, the probability of accepting the label as a truthful self-description would increase and, hence, so would the impact of this information on subsequent decisions.

These effects might be accounted for in literature on mindlessness in consumer decision making (e.g., Dijksterhuis,

Smith, Van Baaren, & Wigboldus, 2005). Research in this area proposes that complying with a request is often a rather automatic response that is especially prone to occur under conditions of relative mindlessness. For example, based on dual process theories (Chaiken & Trope, 1999), Fennis, Das, and Pruyn (2004) showed that the Disrupt-Then-Reframe technique (Davis & Knowles, 1999) works because the disruption acts as a distracter. It induces mindlessness and reduces counter-argumentation. When cognitive resources are scarce, people are not capable of processing message characteristics carefully and tend to rely on peripheral cues, such as a social label (Chaiken, 1987; Petty & Cacioppo, 1986).

It seems reasonable to assume that these distraction conditions often apply in the everyday consumer context. Both the purchase and use of products, which carry labeling messages, are embedded in a continuous stream of mental activities (Alba & Marmorstein, 1992). When coming across a social label, either while paying at the cash register and trying to remember where the car is parked or when going over that day’s appointments while applying deodorant in the morning, our limited cognitive resources are directed elsewhere. We expect the labeling procedure to work in common, cognitively demanding circumstances.

## 6. Overview of the studies

In the first study, we tested whether a pro-environmental label that follows an alternatively motivated behavior elicits pro-environmental behavior and verified whether cognitive distractions facilitate the labeling effect. In Study 2 we tested whether the social label indeed motivates people to re-attribute their previous behavior. We also tested whether distractions reduce contemplation on the veracity of the self-description that the label provides. We went on to verify whether the labeling effect generalizes to situations in which cognitive impairment occurs *during* choice making rather than during exposure to the label (Study 3) and to other types of cognitive impairments (Study 4).

### 6.1. Study 1

Allen (1982) tested the potential of social labeling for mass communication. As in that study, we compared the effect of providing a social label with that of a content-based persuasion message that communicates arguments in favor of pro-environmental behavior. However, we used a task that provokes a pro-environmental choice that is not driven by pro-environmental values but rather by a subtle external motivation. The subsequently provided label suggests an internal re-attribution of that choice to personally held pro-environmental values. We hypothesized that the social label would be more effective if the participants’ cognitive resources are impaired or directed elsewhere at the moment of processing it. If they are not distracted, however, we predict that elaborate processing of the content of the social label will lead to its dismissal. Therefore we expect social labels to be ineffective when participants are not distracted.

### 6.1.1. Method

**6.1.1.1. Participants and design.** One hundred and one undergraduate students (40 male, 61 female) were paid 6 € for participation in this study, which took about 50 min. Upon arrival, groups of five to eight were seated in front of a computer screen in a semi-closed cubicle. The experimental design included two between-subject factors: communication type (label, explicit plea, and control) and cognitive load (load and no load).

#### 6.1.1.2. Procedure and materials

**6.1.1.2.1. TV-choice task.** First, participants completed a TV-choice task on paper (adapted from Verplanken & Holland, 2002). This task was meant to provoke an environmentally friendly choice. We constructed a list of seven TVs, which were rated on seven attributes (image quality, image quality in sunlight, sound quality, remote control quality, ecological aspects, ease of programming and speed of changing channels). This information was represented in a 7 by 7 brand-by-attribute matrix (see Fig. 1). The seven TVs were listed in the rows of the matrix, represented by letters A to G. The seven attributes were listed in the columns of the matrix. One of five possible symbols (–, –, 0, +, ++) evaluated every TV on each attribute. Above the choice matrix, a short legend explained what the attributes referred to. The ‘ecological aspects’ attribute referred to electricity consumption and the degree to which the TV-set contains polluting components and non-recyclable materials. TV-set ‘C’ was superior for both image and sound quality. These dimensions were pre-tested ( $N=54$ ) as the most important features in the choice for a TV-set. Consistently, all participants chose this TV. Importantly, TV C was also rated best on ‘ecological aspects’ (+). This way, participants were provoked to make an externally motivated environmentally friendly choice.

**6.1.1.2.2. Communication type and cognitive load manipulations.** Subsequently, participants were randomly assigned to one of three conditions. Those in the labeling condition received feedback on their choice. This feedback communicated the social label. Instructions that appeared on the screen explained that the TV-choice task was used by a well-known consumer organization to identify different segments of consumers. For every possible TV-choice, a description was given of the typical consumer choosing that TV-set. For TV C, the description said that the typical consumer choosing this option was ‘very concerned with the environment and ecolog-

ically conscious’. A second group, assigned to the explicit plea condition, read an explicit plea for ecologically conscious consumer behavior. Additionally, it provided some tips for reducing waste production and efficient recycling (see Appendix A). A third, control group did not get any information during this phase.

Within each of the three groups, half of the participants were assigned to the cognitive load condition. The cognitive load task consisted of remembering a six-digit number (Shiv & Fedorikhin, 1999). Participants were instructed to do so after entering the TV-set of their choice and before getting feedback. After reading the social label, the explicit plea, or nothing at all, they were asked to recall the number they were supposed to remember. Five participants (5%) failed to reproduce the correct number, and they were discarded from further analysis.

#### 6.1.1.2.3. Dependent measure: the product-choice task.

After 15 min of unrelated filler tasks, participants completed a product-choice task. This task consisted of making 10 product choices. Participants were presented with 10 product pairs: five filler pairs and five critical ones. In each critical pair, one product was a more environmentally friendly but more expensive alternative of the other (see Appendix B). We asked participants to indicate which product they would pick if they were to purchase them now. The critical product categories were cookies (differing in the amount of plastic used for wrapping), kitchen paper, deodorants, energy-efficient lamps, and detergents. For eight product categories, the price of the more environmentally friendly product was 1.05 €, whereas the less environmentally friendly product cost 0.95 €. For the lamps, the prices were 1.50 € and 1.30 €, respectively, and for detergents, they were 1.40 € and 1.30 €. These prices were pre-tested in a different sample of the same student population ( $N=34$ ) by informing participants about the shop value of a certain object and asking them how much they would be willing to pay for a more ecological variant of that product. We used the median price mentioned for the ecological products in the choice task. The 10 product choices appeared in random order on the screen. We counted the number of environmentally friendly choices participants made on the five critical items, which constituted our dependent variable.

### 6.1.2. Results

We conducted a three (communication type: label, explicit plea, and control) by two (cognitive load) ANOVA. This revealed a significant interaction between communication type and

TV-set	Image Quality	Image Quality in sunlight	Sound Quality	Remote Control Quality	Ecological Aspects	Ease of Programming	Speed of Changing Channels
A	+	--	+	0	0	++	-
B	--	0	++	+	-	0	+
C	++	0	+	+	++	+	+
D	+	-	--	0	-	+	++
E	-	-	0	++	+	+	-
F	++	-	0	0	--	0	-
G	0	++	--	+	-	0	+

Fig. 1. The brand-by-attribute matrix of the TV-choice task.

Table 1  
Number of environmental choices made as a result of communication type and cognitive load at encoding (Study 1)

Communication type	Cognitive load at encoding			
	Load		No load	
	Mean	SD	Mean	SD
Label	3.67	0.90	2.53	1.01
Explicit plea	2.56	1.26	3.00	0.94
Control	2.29	1.07	2.65	1.06

cognitive load ( $F(2, 90)=5.77; p<0.01$ ) and a marginally significant main effect of communication type ( $F(2, 90)=2.86; p=0.06$ ) (see Table 1). As expected, within the no load condition, communication type had no effect ( $F(2, 90)=0.93, p=0.37$ ), whereas in the load condition, it did ( $F(2, 90)=7.23, p<0.01$ ). Tukey pairwise comparisons showed that, under cognitive load, participants in the social label condition made more environmental choices than either those in the explicit plea ( $p<0.02$ ) or the control condition ( $p<0.01$ ). We found no differences between the explicit plea and control group within the load condition ( $p=0.77$ ).

A further test showed that, within the social label condition, cognitive load led to more environmental choices than the absence of load ( $F(1, 90)=9.44, p<0.01$ ). Neither in the explicit plea condition ( $F(1, 90)=1.44, p=0.23$ ) nor in the control condition ( $F<1$ ) did we observe a cognitive load effect.

### 6.1.3. Discussion

We found evidence that cognitive distractions moderate the impact of a labeling procedure. Processing the label while cognitive resources were directed elsewhere resulted in using it as a guide in subsequent decisions. When cognitive resources were not limited, the social label had no effect. We assume that cognitive distractions, such as load, disrupt the application of persuasion knowledge because they impair reflection on the actual reason of the TV-choice. If that is true, then motivating participants to reflect on the actual reasons for their purchase, after receiving the social label when mentally distracted, should suppress the labeling effect. We will test this hypothesis in the next study.

## 6.2. Study 2

The aim of this study was to replicate the labeling effect of Study 1 and provide additional insight into the process. We tested the hypothesis that cognitive distractions disrupt the application of persuasion knowledge because they impair reflection on the actual reason for the TV-choice. We used the same procedure as in Study 1 and added a factor. We asked half of the participants to indicate, after completing the TV-choice task and the subsequent manipulation, how important each of the seven attributes on which the TVs were rated had been. We also asked the other half of the participants to complete the importance rating task but only *after* the dependent measure was completed. This allowed us to verify the hypothesis that the social label results in a re-attribution of an alternatively

motivated behavior. We dropped the explicit plea condition from the design because it did not add extra information in the first study.

### 6.2.1. Method

**6.2.1.1. Participants and design.** One hundred fifty-eight undergraduate students received 6 € for participation in the experimental session, which lasted about 50 min. The experimental design included 3 between-subject variables. These were communication type (social label versus control), cognitive load (load versus no load), and reflection (reflection on TV-choice versus no reflection).

**6.2.1.2. Materials and procedure.** Upon arrival, groups of five to eight participants were requested to take a seat in front of a computer screen in a semi-closed cubicle. First, they completed the TV-choice task. Four participants (2.5%) did not pick the TV-set that scored higher on image and sound quality and were discarded from further analysis. Then, we manipulated communication type and cognitive load as we did in Study 1. Directly after these manipulations, half of the participants were asked to indicate to what degree each of the seven attributes had determined their TV-choice on a 25-point scale (ranging from *not important at all* to *very important*). We reasoned that this task elicits reflection on the initial TV-choice and would allow participants who received the label under cognitive load to contemplate the actual reason for choosing the TV-set they chose. After 15 min of unrelated filler tasks, all participants completed the product-choice task. Finally, those participants who did not indicate the importance of the seven attributes previously, did so at the end of the procedure.

### 6.2.2. Results

**6.2.2.1. Product-choice task.** We conducted a two (communication type: label versus control) by two (cognitive load: load versus no load) by two (reflection on TV-choice versus no reflection) ANOVA. This resulted in a significant three-way interaction ( $F(1, 146)=5.16, p<0.03$ ) (see Table 2). We replicated the results of Study 1 in the no reflection condition ( $F(1, 146)=8.84, p<0.01$ ). Contrasts showed that the social label produced more environmentally friendly choices when communicated under load than in the no load condition ( $F(1, 146)=9.07, p<0.01$ ). In the control condition, cognitive load had no effect

Table 2  
Number of environmental choices made as a function of communication type, reflection, and load at encoding (Study 2)

Communication type	Reflection condition	Cognitive load at encoding			
		Load		No load	
		Mean	SD	Mean	SD
Label	No reflection	2.94	1.25	1.86	1.24
	Reflection	2.16	1.21	2.33	1.06
Control	No reflection	1.62	0.86	2.00	1.02
	Reflection	2.24	0.90	2.25	1.24

( $F(1, 146)=1.28, p=0.26$ ). Within the load condition, those participants who were labeled made more ecological choices than those who were not ( $F(1, 146)=13.49, p<0.01$ ). Within the no load condition, there was no effect of communication type,  $F<1$ .

As expected, having participants reflect on their TV-choice suppressed the labeling effect. Within the reflection on TV-choice condition, the main effects and the interaction between communication type and load did not reach significance (all  $F_s<1$ ) (see Table 2).

**6.2.2.2. Ratings of attribute-importance in the TV-choice.** We calculated the relative importance attached to the environmental attribute for those participants who indicated the importance of each of the seven attributes at the end of the experiment (i.e., the no reflection condition only). We divided the rating given to this attribute by the sum of the ratings given to the seven attributes. An increase in the importance attached to the environmental attribute would mean that the manipulation was successful at suggesting a re-attribution of the TV-choice. We found an interaction effect ( $F(1, 76)=4.59, p<0.04$ ), as shown in Table 3. Within the labeling group, those who received the distracting load task rated the environmental attribute as more important than those who did not ( $F(1, 76)=4.59, p<0.04$ ). Within the control group, there was no effect of cognitive load ( $F<1$ ). Under cognitive load, those who received the label rated the environmental dimension as more important than those who were not labeled ( $F(1, 76)=6.39, p<0.02$ ). Without load, there was no effect of communication type ( $F<1$ ).

### 6.2.3. Discussion

This study added more insight into the process of social labeling in two ways. First, we obtained support for our hypothesis that cognitive load facilitates the labeling effect because it reduces the activation of persuasion knowledge. Processing the label under load seems to interfere with participants questioning the truthfulness of the label. By making them reflect on their TV-choice immediately after receiving the label, however, we allowed the participants to correct for the re-attribution that the label proposed. Second, our finding that importance ratings changed as a result of cognitive load and communication type suggests that the impact of the label extends beyond the mere self-perception process to an active re-attribution of the initial TV-choice. The label influences the interpretation of previous behavior and makes environmental values more salient (Alba et al., 1991; Snyder & Uranowitz, 1978). Several theories predict that the salience of a certain

value increases the probability of acting upon it (Albarracín & Wyer, 2001; Bem, 1972; Schwarz et al., 1991). We have shown that it is possible to increase the salience of a certain value, in this case environmental friendliness, by (re)attributing an externally provoked act to that motive.

### 6.3. Study 3

For practical purposes, it is important to know whether a social label can influence a targets' behavior, even if it has been processed with full attention. We explore this possibility in this and the following study. Work on assimilation and contrast effects (Martin, Seta, & Crellia, 1990; Meyers-Levy & Tybout, 1997) showed that whether possible counter-arguments regarding an issue are retrieved later is determined by the availability of cognitive resources at the moment of retrieval. Findings of Schwarz and Bless (1992) and Meyers-Levy and Tybout (1997) claim that the same factors determine the effect of a contextual cue (e.g., the label), regardless of whether this influence occurs at encoding or at judgment (when retrieving the cue). Therefore, we predict that the label will be effective if participants are cognitively distracted at the moment of decision making, even if they processed the label with full attention. In this case, persuasion knowledge that was activated at the moment of processing the label will not be recalled at the moment of using the label as a guide to make decisions. We verify this hypothesis in the present study. We replicate Study 1, changing one aspect in the design. In this study the cognitive load task is implemented at the moment of making ecology-related decisions and not at the moment of processing the social label.

#### 6.3.1. Method

**6.3.1.1. Participants and design.** Eighty-six undergraduates participated in this study and were paid 6 € for participation in an experimental session, which lasted about 50 min. We manipulated two between-subjects factors: communication type (label versus control) and cognitive load (load versus no load).

**6.3.1.2. Procedure and materials.** First, participants completed the TV-choice task and were randomly assigned to one of two conditions. One group received the social label as feedback on their choice, and the other group did not get any information. Six participants (7%) did not choose the superior TV-set and were discarded from further analysis. After 15 min of unrelated filler tasks, participants completed the same product-choice task used in Studies 1 and 2. Orthogonally to the communication manipulation, we asked half the participants to remember a six-digit number while making their product choices.

#### 6.3.2. Results

An ANOVA revealed a significant interaction between communication and cognitive load ( $F(1, 76)=6.87, p<0.01$ ) (see Table 4). As predicted, participants in the labeling condition who made their choices under cognitive load chose more environmental products than those who were not cognitively distracted ( $F(1, 76)=8.93, p<0.01$ ). In the control

Table 3  
Importance attached to the ecology-dimension as a function of communication type and load at encoding (Study 2)

Communication type	Cognitive load at encoding			
	Load		No load	
	Mean	SD	Mean	SD
Label	0.15	0.07	0.10	0.06
Control	0.10	0.06	0.11	0.07

Table 4  
Product choices as a function of communication type and cognitive load in the decision phase (Study 3)

Communication type	Cognitive load in the decision phase			
	Load		No load	
	Mean	SD	Mean	SD
Label	3.15	1.46	1.90	1.18
Control	1.76	1.25	2.09	1.41

condition, we found no effect of cognitive load ( $F < 1$ ). In the load condition, labeling led to more ecological choices than in the control condition ( $F(1, 76) = 9.91, p < 0.01$ ). In the condition without cognitive load, we did not observe a labeling effect ( $F < 1$ ).

### 6.3.3. Discussion

As predicted, distracting cognitive resources at the moment of making purchase decisions allowed the labeling effect to emerge. This suggests that consumers recall the persuasion knowledge associated with the information provided by the label when cognitive resources are available. Under load, however, this recall becomes suppressed. This finding implies that a labeling message should work unless the consumer is fully focused on the task at hand, both while processing the label and while purchasing a product. If at either time attention is distracted, persuasion knowledge is either not activated or not recalled, and the social label will influence purchase decisions. Most situations in our daily lives feature a large number of stimuli that compete for our limited cognitive resources. Therefore, we argue that cases in which consumers are fully focused on both critical occasions in the labeling procedure are rather exceptional.

## 6.4. Study 4

In the previous studies, we showed that a social label that suggests a re-attribution of previous behavior influences subsequent choices only if its communication is accompanied by a distraction. This distraction either disrupts the application of persuasion knowledge or interferes with the recall of counter-arguments that resulted from the activation of persuasion knowledge. We argued before that the typical context in which the consumer makes decisions is cognitively demanding. Therefore the demonstrated social labeling effects are likely to apply in a consumer setting. In this study, we intended to replicate the distraction effect, using a more ecologically valid type of distraction manipulation: repeated decision making.

Previous research has suggested that repeated decision making increases the impact of salient or accessible information in consumer judgment (Bruyneel, Dewitte, Vohs, & Warlop, 2006). These effects appear similar to those of cognitive distractions (Rottenstreich, Sood, & Brenner, 2007); hence, repeated decision making, which prevails in many consumer contexts, may also increase the impact of a social label. We build on the results of Study 3, which indicate that the social label can still affect behavior even in the case that a social label

has been processed elaborately and its content is rejected if a distracter disrupts the application of persuasion knowledge at the time of the decision. In the present study, it is the act of making decisions itself which provides the distraction, rather than an artificial cognitive load manipulation. We predict that a social labeling communication, in which the label has been processed with full attention, will not influence initial choices in a task when full cognitive resources are available, thereby replicating our null effects in the no load conditions of previous studies. After several trials, however, we expect the social label to increase pro-environmental decision making, compared to a control condition.

### 6.4.1. Method

**6.4.1.1. Participants and design.** One hundred fifty-seven undergraduate students (65 men and 91 women) participated in the experimental session, which lasted about 50 min, in return for 6 €. We included one between-subjects factor (communication type: label versus explicit plea) and one within-subjects factor (decision trial) in the design.

### 6.4.1.2. Procedure and materials

**6.4.1.2.1. Manipulation.** Like the previous studies, participants started with the TV-choice task. Eight participants (5.7%) were discarded from analysis for not choosing the superior set. After choosing their preferred TV-set, respondents were randomly assigned to one of two communication type conditions. As explained, we expected that repeated choice making would constitute a strain on participants' cognitive resources. Therefore, we expected the impact of the social label to emerge after repeated choices, as in previous circumstances with cognitive load. We wondered whether there would be a similar effect with an explicit plea. After all, the flaws associated with such an approach, which we discussed in the introduction, like reactance (Brehm & Brehm, 1981), cognitive dissonance (Festinger, 1957) and thinking about costs of the promoted behavior (Warlop et al., 2003), all result from cognitive elaboration on the information the plea provided. Perhaps the repeated decision would decrease the salience of these ponderings. To constitute a conservative test of our hypothesis, we therefore selected the explicit plea condition as a control condition in this study.

**6.4.1.2.2. Repeated choices, public good dilemma.** After 15 min of unrelated filler tasks, participants completed the dependent measure. We constructed a repeated choices public good game, which was framed as an ecological task. In a public good game, all players can choose to invest a part of their resources in the public good. The public good is obtained only when the contributions pass a certain threshold (the provision point). Once obtained, all participants involved can equally enjoy the public good, irrespective of the size of their contribution. If the public good is not obtained, all participants lose their invested resources. We asked participants to imagine that they were to buy 10 bags of potato chips for a party. The potato chips alternatives were either packaged in conventional or in bio-degradable bags. Participants had to indicate how many items of each type they would purchase (summing to 10). Instructions on the computer

Table 5  
Number of bio-degradable bags chosen in the environmental social dilemma task

Communication type	Game trial					
	Trial 1		Trial 2		Trial 3	
	Mean	SD	Mean	SD	Mean	SD
Label	5.17	3.18	6.90	3.45	8.65	2.73
Explicit plea	5.30	3.52	6.73	3.56	7.06	3.54

screen explained that the bio-degradable bags were more expensive (1.35 € versus 1.10 €) because they had a lower market-share. An increased demand for chips packaged in bio-degradable bags (i.e., the contribution) would lead to lowering of the prices for this type of packaging in the following trials (i.e., the public good). A group of eight participants played the public good game. They were told that if the group as a whole would buy a sufficient number of bio-degradable bags (i.e., the threshold), the price of this type of bags would drop in the following trial of the game, in which they had to buy 10 more bags (the price of the chips wrapped in conventional bags was fixed throughout the game). Participants played three such trials. We did not specify the number of bio-degradable bags they collectively needed to buy to produce the price drop. Had we done so, participants would be tempted to apply the “equal cost share” strategy, contributing his or her fair share to obtain the public good, in this case, the price drop (Bagnoli & McKee, 1991). After each trial, all participants received bogus feedback that indicated that the public good was not obtained.

#### 6.4.2. Results

We conducted a repeated measures ANOVA with one between-subjects variable (communication type: social label versus explicit plea) and the three repeated trials of the public good game as a within-subjects variable. We found significant differences between trials ( $F(2, 294)=48.94, p<0.01$ ), which are presented in Table 5. In trial 2, participants chose more bio-degradable bags than in trial 1 ( $F(1, 147)=40.08, p<0.01$ ), and in trial 3 they chose even more than in trial 2 ( $F(1, 147)=17.47, p<0.01$ ). This is evidence from the fact that participants were motivated to obtain the public good (Rondeau, Schulze, & Poe, 1999). More importantly, we found a significant interaction between communication type and decision trial,  $F(2, 294)=5.89, p<0.01$ . In trials 1 and 2, we did not find differences between communication conditions ( $F$ 's  $<1$ ). In trial 3, however, participants who had received the social label chose more bio-degradable bags than those in the explicit plea condition ( $F(1, 147)=9.30, p<0.01$ ). In the labeling condition, participants increased their share of bio-degradable bags compared to trial 2 ( $F(1, 147)=23.75$ ), but this was not the case for participants in the explicit plea condition ( $F<1$ ).

#### 6.4.3. Discussion

This study showed that repeated decision making, a very common activity for a consumer, produces sufficient distraction for the social labeling effect to show up, even when the label was processed with full attention. In a repeated public goods

game, participants initially chose, on average, a fifty–fifty distribution between traditional and bio-degradable bags. As this proved not to be sufficient for achieving the public good (i.e., the price drop), in trial 2 the share of bio-degradable bags increased, indicating participants were motivated to obtain the public good at a personal expense. In trial 3, the distribution remained constant in the explicit plea, whereas in the label condition, the share of bio-degradable bags further increased. The results in this third trial are comparable to those of the cognitive load conditions of the previous studies. This suggests that the suppression of the persuasion knowledge effect generalizes to other circumstances that distract cognitive resources. As conditions of cognitive load or repeated choosing are prevalent in our daily lives, this finding suggests that the social labeling procedure is widely applicable. Findings in the explicit plea group in the first and the fourth study add to the observation made in the introduction that providing people with ‘food for thought’ is not an efficient strategy by itself. This is certainly true in domains where the attitude towards the behavior (e.g., paying a higher price for the same functionality) is more negative than the attitude towards the overarching value (i.e., being an environmentally conscious consumer).

## 7. General discussion

Earlier demonstrations of the social labeling technique showed that providing a consumer with a social label of prior behavior stimulated future similar behavior. In these demonstrations, the most salient meaning of the labeled behavior (e.g., being tidy) was consistent with the social label (e.g., tidiness). Our findings extended the social labeling technique to behaviors (e.g., buying the best TV-set) of which the most salient meaning is *not* consistent with the social label (e.g., environmental). This extension removes the challenging requirement that the desired behavior (e.g., tidy) should occur spontaneously in order to boost the accompanying self-conception. Consequently, our extension substantially increases the applicability of the technique for social marketing applications. While we tested the effect of this procedure on ecological behavior, it should be applicable to other areas of socially desirable behavior, like health behavior, voting, and altruistic behavior.

Social labeling proved effective only when cognitive resources were constrained, either at the time of the communication or at the time of the decision. We argued that cognitive constraint is the rule rather than the exception in real life because the majority of our daily decisions are part of a stream of continuous and overlapping mental activities. We further argued that the effect of cognitive distractions is due to the suppression of persuasion knowledge activation. Our findings contribute to the literature on mindlessness in consumer decision making (e.g., Dijksterhuis et al., 2005). Consistently, our data suggest that consumers are unable to reject a piece of information as untrue or invalid when processing it unconsciously (e.g., Gilbert et al., 1990).

Previous research has suggested that such subtle techniques, requiring minimal conscious thought, may be more effective in the longer term than campaigns that provoke people to



explicitly contemplate consequences of behavioral alternatives by providing arguments (Albarracin & Wyer, 2001). Albarracin and McNatt (2005) studied the effects of past behavior on attitudes towards university policies. Participants were led to believe that they had unconsciously supported or opposed a social policy. This feedback had direct effects on attitudes about the policy and the expected outcomes of the policy. Self-perception effects lasted longer than more specific elaborations about the outcomes of the policy.

We included an explicit plea condition in Studies 1 and 4 to compare the effect of our labeling procedure with the practice of providing argument-based messages. In neither case did these explicit messages increase pro-environmental decision making. However, we do not dispute the value of educational campaigning. Lack of knowledge is an important predictor of non-compliance to socially desirable behavior in many domains (Kollmuss & Agyeman, 2002). Our results do suggest that this approach can be complemented with more direct behavior-inducing instruments. In the case of social labeling, this effect may proceed automatically via self-perceptions.

Social labeling is related to techniques that use descriptive social norms as a persuasion technique (Cialdini, 2003; Cialdini et al., 1990). However, rather than invoking social norms, social labeling suggests the a priori existence of *personal norms or values* to engage in a certain pro-social behavior. Our data showed that describing consumers as having certain values increases the chance of them acting upon those values later on. Study 2 suggested that social labeling even results in consumers changing their interpretation of previous behavior such that it is in line with the value suggested by the label. Especially in situations where the social descriptive norm is *not to engage* in a certain socially desirable behavior (e.g., taking public transport instead of one's own car), a persuasion tool suggesting such personal norms could be a useful alternative.

It is appropriate here to consider some issues regarding the ethics of employing such a technique. Business ethics involve considering the costs associated with such behavioral changes and weighing them against the potential benefits for that person and for society at large (Laczniak & Murphy, 1993; Rangan, Karim, & Sandberg, 1996). With respect to the costs associated with the application of such a technique, one can wonder whether it is harmful to use a tool that may change the way people perceive themselves. This seems not to be the case if the self-perception that the label suggests is not inconsistent with the consumer's present self-perception and if the label is evaluated positively. Our analysis of construal level theory (Trope & Liberman, 2000) suggests that the long-term goals that consumers harbor can be overridden by short-term self-interested motives. The general interest people seem to have in environmental issues suggests that a social labeling technique might remind them of their *own* goals and help them to pursue that goal, in spite of other temptations. In those situations in which the ultimate goal of the social marketer is supported by the majority of a target population, a tool like social labeling seems acceptable. Manipulating consumers to act in ways that are not consistent with their self-concept, however, may have long-term costs that are difficult to justify.

Social labeling could be used in the context of for-profit marketing as well. Labeling a consumer as a member of a certain brand community or merely as an individual who could benefit from acquiring a certain product may increase the likelihood that s/he will (re-)purchase products of that brand. The benefits for the consumer as well as for society at large are less clear. In this case, the application of such a technique is more likely to be morally questionable.

Future research may look into generalization of this technique. First, there is reason to assume that if the social label is inconsistent with the self-perception the target person already maintains, it will not be accepted and acted upon (Tybout & Yalch, 1980). We also mentioned that desirability of the label plays a role in the ethical analysis, but the question about the relative desirability of the personality trait or values that the label communicates remains worth pursuing. People are motivated to elevate their self-conceptions and to protect their self-concepts from negative information (Sedikides & Strube, 1997) and may be more willing to act upon the communication of a desirable social label. Therefore, people for whom "being environmentally friendly" sounds positive should be persuaded more than those for whom it sounds negative. Other labels a social marketing campaign may wish to use (e.g., eating healthy, engaging in physical activity, buying fair trade products) may have positive or negative associations for different segments of consumers. Perhaps people do accept labels that elevate their self-concept in cases when cognitive resources are abundant. Although the use of negative labels is questionable ethically, research into this topic may be warranted; it is possible that labels that are evaluated negatively are rejected, even under cognitive load conditions. In any event, it is important to extend our understanding of social labeling effects as these are easily applicable to market socially desirable or pro-social behavior.

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## Appendix A. Information given in the explicit plea condition of Studies 1 and 4

Reduce the mountain of waste to a little pile

Did you know that you produce an average of 1.5 kg of waste every day? This way you add some extra kilos to the already huge mountain of waste. We should try to reduce the amount of waste we produce in order to preserve our environment.

With these easy to follow guidelines you can already make a difference:

### 1. Purchase less disposable products

Avoid product which you can only use once

## 2. Pay attention to the packaging

Purchase product which have not packaging or with environmentally friendly packaging. Bio-degradable or recyclable packaging is better for the environment than traditional ones. Glass is better than plastic.

## 3. Sort your waste

By sorting your waste, much of it can be recycled, so less of it needs to be processed and stored or incinerated.

Please contribute to a better environment and a cleaner world for everyone!

## Appendix B. Product attribute specifications of the product-choice task

Product		Choice A	Choice B
Cookies	Price	1.05 €	0.95 €
	Packaging	25 units in 1 plastic wrapper	Each unit wrapped individually
Kitchen paper	Price	1.05 €	0.95 €
	Paper	100% recycled	Non-recycled
Deodorant	Price	0.95 €	1.05 €
	Content	Contains propellants	Environmentally friendly vaporizer
Light bulbs	Price	1.30 €	1.50 €
	Type	Regular	Saving light bulbs
Detergent	Price	1.30 €	1.40 €
	Type	Regular	Ecological packaging and content

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