



Intermediary report – January 2003

**RENDERING SUSTAINABLE CONSUMPTION
BEHAVIOR MORE SUSTAINABLE: PSYCHOLOGICAL
TOOLS FOR MARKETING PROSOCIAL COMMITMENT
CP-15**

KULeuven - UCL

SPSD II



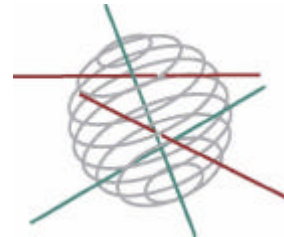
PART 1

SUSTAINABLE PRODUCTION AND CONSUMPTION PATTERNS



**This research project is realised within the
framework of the Scientific support plan for a
sustainable development policy (SPSD II)**

**Part I “Sustainable production and consumption
patterns”**



The appendixes to this report are available at :
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Scientific support plan for a sustainable development policy (SPSD II)

Part I “Sustainable consumption and production patterns”

Projects CP/51/151 and CP/51/152

1. Title

Rendering sustainable consumption behavior more sustainable: psychological tools for marketing prosocial commitment

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2. Introduction

2.1 Context and summary

Sustainable consumption patterns in individual consumers are in society’s best interest. But for most people in most circumstances, sustainability will conflict with self-interest.

Unsustainable products are cheaper, unsustainable means of disposal are less effortful, driving ones’ own car is more comfortable than using public transportation, etc... Each of these choices confronts the individual consumer with a social dilemma: the choice between an easy solution that hurts society at large, and a sustainable alternative for which the individual pays a price. Government (at different levels) acts as a social marketer, assuming the difficult responsibility of promoting individual consumer choices in favor of the collective (sustainable) interest, and against one’s personal interest. To promote sustainable consumption the government disposes of two kinds of marketing instruments: communication instruments and instruments for direct behavioral control. Its responsibility is to both instigate sustainable behavior, and to foster a change in mentality that will make sustainable behavior self-sustainable.

In our project we investigate how these two kinds of instruments can be optimally used and combined. We cover two specific research questions: (1) Does the government have to attempt to convince, or is it better to use more subtle means to activate existing pro-sustainable motivations, and (2) if direct behavioral control is necessary, how does one go from mere behavioral change to a true change in mentality and behavioral persistence in the long run?

2.2 General research objectives

Government-as-a-marketer can use communication instruments, but often has to refer to

regulatory actions and direct influence on prices of different behavioral options to accomplish. After all, initiating and persisting with sustainable behavior is difficult for any consumer, because the behavior tends to clash with self-interest. Some will realize the importance of behaving in ways that are responsible to the environment and the well being of others, even if they live in distant places. Still, sustainable behaviors are mostly repetitive everyday behaviors, and often self-interest will creep back in. For other consumers, self-interest will always dominate.

Our research project covers two major questions of general importance to the marketing of brotherhood. Our first question deals with the instigation of sustainable behavior, and the accompanying question about which type of government message would be most suitable to initiate the behavior. Our second question deals with the persistence of such behavior, especially in cases where the behavior was first initiated with 'carrot-and-stick' methods such as rewards or the threat of fines. The background of these objectives will briefly be discussed below. For a more detailed account we refer the reader to the project proposal.

Instigation of sustainable behavior

First, we want to investigate which kind of communication is best suited to induce sustainable behaviors in consumers who also have more selfish options. Traditionally, the government's position has been that of an advocate, trying to convince consumers to take the collective interest into account. Social marketing of the traditional kind is the art of presenting convincing arguments, trying to make consumers change their minds about what is the best thing to do. We suspect that this approach is not optimal. Thinking about options activates the pros but also the cons of each behavioral option, including the self-interested one. We propose an alternative approach that uses the principle of priming, heavily studied in social psychology. Priming is the art of unobtrusively bringing subtle cues in the environment, which activate available prosocial memory content, and subtly guide behavior in prosocial directions, typically without the recipient of the information being aware. We build on the results of our current SPSP1 projects to examine the scope of the applicability of the priming technique. More in particular we want to investigate (task 1A) whether our earlier findings generalize to sustainable decision making in which the mutual dependence of individuals is less obvious or absent but in which other citizens may serve as an audience for any individual consumer's behavior. We also want to investigate (task 1B) whether general 'pro-sustainable' priming messages are effective, how effective they are in comparison with messages designed for a specific behavior, and whether and how sustainable behavior can be 'bundled' with common fast-moving goods consumer behavior (such as in buying Fair-Trade coffee). Finally, with our first objective, we want to investigate (task 1C) whether the proposed subtle forms of communicating indeed outperform more argumentative classic

approaches of social marketing, and under which circumstances they do. The progress we made in 2002 refers solely to this first objective, and will be discussed below.

Persistence of sustainable behavior

Our second objective is to investigate how the social marketer should combine communication with direct behavior modification techniques (pricing, regulations) championed by lawyers and economists. Carrots and sticks are necessary because there are some who are not to be convinced of the collective interest in any other way. But what happens to those for whom the carrots and sticks were not necessary? The available evidence suggests that they will put a step backwards. They will now justify their behavior on the basis of the rules or price advantages of sustainable behavior, and lose intrinsic motivation. We introduce the practice of social labeling as a potential solution to this problem. Labeling is a summary for any social marketing intervention suggesting consumers that their behavior is due to the kind of person they are. Some limited evidence suggests that labeling may foster persistence of behavior, because it makes consumers see their sustainable behavior as their own motivated choice, not forced by the environment.

We have planned extensive study of the usefulness and limits of this technique. We want to investigate which type of carrot-and-stick approach can benefit most from labeling effects, and we also look at how specific and how explicit labels should be to have the desired effect. Sustainable consumption by consumers is a priority for achieving sustainable development. Sustainable consumption manifests itself in many domains: choosing sustainable ('green' or ethical) products and packaging, choosing sustainable ways of product disposal, rational water consumption, choosing sustainable (public) means of transportation, ethical investments, etc... In 2002 we have not yet made substantial progress towards this objective and we will not report on it below.

3. Description and justification of the methodology

Most of us are experimental psychologists by training, some raised within the research tradition of social psychology (Yzerbyt en Corneille), some transferred to consumer research within a marketing context (Warlop). Obviously this is reflected in the content of our project: we look at ways to influence sustainable behavior by individuals. It is also reflected in our methodological approach. Our preferred research methodology is (1) experimental, (2) theory-driven, and (3) incremental.

(1) Experimental research is the only valid way to infer causality from observed relationships between variables. Specifically, if one wants to investigate whether a particular intervention

is the true cause (and not merely a correlate) of an effect on (sustainable) behavior, one needs to manipulate presence versus absence or degree of the intervention and observe its effects on behavior. Correlational methods used by survey research or observational studies can only infer relationships between variables, and are always inconclusive with respect to causality.

(2) An experiment –like any other formal research method- always reduces reality to observable variables. Even in field studies reality is reduced to what is being measured or manipulated. Generalization of the results beyond the specific research environment is – stricto sensu- not allowed. We hold strongly to the axiom that findings and results can only contribute to the support for theories, which explain a spontaneously occurring behavior or the response to an intervention. Generalization and application need to be based on theory, not on specific research findings. Therefore our approach is both driven by theory (to generate scientific expectations or hypotheses) and contributing to theory (by finding support –or not- for those theories). Our recommendations for implementation will be based on theoretical understanding, not directly on the empirical findings of our studies, as those will never generalize to any application field.

(3) Experimentalists prefer an incremental approach to developing a research program. ‘Grand’ studies with a multitude of interacting variables are hard to manage, and their results hard to interpret. We start with small scale experiments in tightly controlled laboratory conditions, and gradually introduce qualifying environmental complexity as we gain confidence in our results.

As a result, you will see a multitude of studies, each tackling a small aspect of the total problem, in support of theoretical conclusions that generate practical guidelines. In what follows, we will offer some very preliminary comments as to the implications of our work, but we will refrain to make full-fledged recommendations until we reach the end of our project work.

4-5. Our PODO2 research in 2002 and planning for 2003

The progress we made with respect to research questions in our proposal will be discussed here. Space limitations prohibit a very detailed account in this document. Two completed manuscripts and one preliminary report of results are added in the appendix. For several other of the research objectives we have made only limited progress, or none at all. These will be only briefly mentioned.

Objective 1A: generalization of prior results to other types of social relationships.

1. Generalizations from PDG's to donations (completed manuscript – see appendix 2).

Our prior survey research, part of our PODO1 projects, found that a significant majority (approx. 30 %) of our respondents qualified as 'proselfs' (holding a value system that promoted own outcomes over –or independent of- those of fellow-citizens). The proselfs were also much less inclined to follow the existing rules regarding recycling behavior. Our other research showed that about half of this group would qualify as 'high consistent proselfs'. A series of experiments conducted under PODO1 revealed that for these consistent proselfs messages promoting cooperation in a social dilemma have the opposite, perverse, result of more defection. All other participants (the prosocials, and the less consistent proselfs) were positively influenced by prosocial messages. A copy of the manuscript describing these PODO1 experiments is also added in appendix, as it provides a general introduction to the research background and methodology of all our studies (*see Smeesters, Warlop, Van Avermaet, Corneille and Yzerbyt, forthcoming in the Journal of Personality and Social Psychology; See appendix 1*).

Section 1A of the current project is concerned with the generalization of these results to other tasks than the interdependent prisoners dilemma game. While in the literature on sustainable behavior, the prisoners dilemma game is often used as both a metaphor and concrete operationalization of behavior, we know that for many sustainable behaviors the interdependence of one's own behavior and that of others is much less salient than in a PDG. We therefore wanted to test the generalizability of our prior work to situations where an individual can contribute to the outcomes of other individuals (without being dependent on those individuals for his or her own outcomes). In the social dilemma literature, this type of game is a 'dictator' or 'donation' game, the dictator analogy referring to the fact that the agent does not have to worry about the reactions of others to his or her own behavior. In a series of studies we (Smeesters, Warlop, Corneille, Yzerbyt and Van Avermaet 2002) examined the parallels and differences between both types of games.

In Experiment 1 we tried to replicate the findings of Smeesters et al (2003), using stereotype primes, and extending the assessment of mediating process to impression formation about the partner in a PDG. Stereotype priming refers to the use of models (celebrities or not) in advertising or other forms of communication, as a means to persuade. We used 'priest' related primes to activate a cooperative norm, and 'business man' related primes to activate a proself norm. We were able to replicate our earlier findings and showed that they are mediated by impression formation about the interaction partners. More specifically, as in Smeesters et al (2003) priming consistent proselfs with 'priest' stereotypes influenced in consistent proselfs the impression that the interaction partner would be cooperative and

therefore exploitable. For this group free riding was increased instead of reduced as a consequence of prosocial priming. For all the other groups, behavior assimilated to the primes. Experiment 2 showed that participants in prisoners dilemma games had a higher other-focus and a lower self focus than participants in donation (dictator) games. When considering an action framed as a donation, participants only consulted their inner activated value orientations, while when considering actions in a PDG they concentrated on predicting what the interaction partner would do. Experiment 3 found – as expected – that the behavior of high consistent participants in a donation game was primarily influenced by social value orientations, while in PDG's and for donations by low consistent individuals the primes were more effective. Experiment 4 and 5 showed a higher influence of primes in highly consistent individuals by mere creating the impression that the receivers of donations would later be able to influence the givers' outcome. Experiment 6 showed that low consistent individuals, normally sensitive to primes, started relying solely on the social value orientations when their self-awareness was artificially increased.

2. Planned research

We plan research in which we will attempt further generalization or qualification of our prior results with respect to the nature of the task. On the short term agenda is a series of studies in which we will examine whether sustainable behavior can be influenced by external communication when the others in the 'game' are not participating but merely observing the behavior of the agents. This situation may be the closest to many real-life resource dilemma's: others can not punish me for my non-cooperation with sustainable goals, but they can observe my behavior, and the government –while unable to control me - can intervene to make my behavior more visible to my immediate environment. We will investigate whether the mere presence of others, or even their suggested presence, can activate pro-sustainable social norms that reliably control agents' behavior.

Objective 1B: Boundaries on the priming effects: prime specificity and marketing exchange context.

1. Priming environmental values and instigation of pro-environmental consumer behavior. (preliminary report – see appendix 3)

A general research question within our project is whether general or more specific priming techniques are optimal in promoting specific sustainable behavior, such as environmental behavior. As a first step (Liegeois, Corneille, and Yzerbyt, in progress) we investigated whether specific communication about environmental concerns would be effective in promoting environmental behavior. Two experiments have already been conducted to test whether our results in dilemma situations would transfer to a common purchase context

(buying a TV set). An additional concern of pragmatic importance in sensibilization is whether it is more effective to selectively activate a negative self concept ('I am not enough concerned about the environment') than a positive one ('I am doing good things for the environment'). The first experiment uses a common supraliminal priming technique, while for the second experiment we applied subliminal priming. The results of both studies converge. They support the idea that priming the self associated with negative anti-environmental concerns is most effective in promoting ecological choices.

In Experiment 1 we primed environmental concerns using an autobiographical priming technique. Sixty-six participants were asked to remember and describe either two instances from their personal life of negative environmental behavior that they could have avoided, two instances of personal positive environmental behavior that they could have rejected (but chose not to), or – in a control condition – two unrelated autobiographical behaviors. Afterwards, in an ostensibly unrelated study, they were asked to rate the attractiveness 20 TV sets varying in the presence or absence of pro-environmental and polluting components, and several other unrelated features. This allowed us to compute an index of importance attached to the environment in determining preferences. The results showed that positive self concept priming did not have a significant effect, but that the priming of a negative environmental self-concept increased the attractiveness of the more 'green' TV sets, relative to the preferences in the control group. In Experiment 2, we attempted to replicate these results with a subtle subliminal priming manipulation. One hundred and twenty participants were subjected to a double priming manipulation. They were confronted with either neutral, negative environmental or positive environmental prime words, and orthogonally, with either a self-concept activating prime (their own name) or a neutral letter string. In a second stage they performed the same TV-set rating task as in experiment 1. The results converged with those of the first experiment. Only priming a negative environmental self image led to favoring of the environmentally responsible TV-sets, and only when the self concept was simultaneously activated.

A detailed description and graphical presentation of these results can be found in appendix 3, and a full report of the studies can be expected in the course of 2003.

2. Testing the reliability and construct validity of the Social Value Orientation measure (completed manuscript – see appendix 4)

Part of our objective in Section 1B of the project is the development of a scale measuring differentiated aspects of social value orientation, if our research would show that a more general measure would not capture sufficiently the interindividual variation in the relevant constructs. More specifically, we wonder whether a more general social value orientation measure – as used in the literature- captures differentiation in environmental concern, ethical

concern, or other types of sustainability concerns which might drive behavior. As a first step we (Smeesters, Warlop and Van Avermaet 2002) wanted to test the temporal stability and the construct validity of the more general measure, which will serve as a comparison in further studies.

If social value orientation is a disposition, temporal stability should be rather high. Prior research had cast doubt on temporal stability, but had not taken into account consistency – as we did in our prior studies. Study 1 showed very high temporal stability for high consistent prosocials and proselves (as measured with a 6 month interval). In studies 2 and 3, we assessed construct validity. In Study 2, we showed participants an example of cooperative behavior in a prisoners dilemma game, and tested whether high and low consistent proselves and prosocials would differ in their reactions. The target person also could differ in terms of personality (moral, intelligent, or unintelligent). Study 3 was identical, except that here an example of noncooperative behavior was shown. The results of both studies showed that the choices of high consistent individuals could be predicted on the basis of their social value orientation, while those of low consistent individuals could be predicted on the basis of general social norms (eg., rewarding a moral other acting cooperatively, or being unforgiving towards an intelligent other who acts non-cooperatively).

Our descriptive work in the PODO1 program had found many occasions where individuals felt being the victim of their own cooperative attitude towards the required environmental behaviors (sorting waste). Our respondents in interviews often ‘justified’ their own defection from the cooperative norm as an unforgiving reaction to observed noncooperativeness by intelligent or knowledgeable others. Our current results show that a general social value orientation test, including consistency as an additional measure, captures these types of reactions for a general and abstract cooperation task. Our further research will examine whether it will also capture the responses in a very specific environmental or ethical task.

3. Research in progress

a. The effect on prosocial behavior of communicating specific and extreme models (in progress)

In prior experiments we already worked with priming messages activating social orientations, and messages activating general prototype examples (like priest and business man). We always found that impression of the others in the game were either not affected or that they assimilated to the primes, which mediated the behavioral effects. An other technique is to activate very specific examples (like celebrity individuals) whose inferred personality either has positive connotations or negative connotations for the desired –pro-social- behavior. The operational question is whether recipients of messages assimilate their behavior to the person examples used in communication, or rather contrast their perceptions and plans with those

examples. Suppose Michel Vandebosch (the outspoken president of the animal rights organization GAIA) is brought to mind when agents are thinking about respectful actions for the environment, will this increase or rather decrease the actor's compliance?

In a series of experiments (Smeesters, Warlop and Van Avermaet, in progress) we are testing the hypothesis that the reaction to such examples depends on the nature of the promoted behavior. If a social dilemma is perceived as a prisoners dilemma, the expected behavior of other participants is both ambiguous and important for the actor's own decision. In such cases we expect – based on prior research on impression formation - that one's own behavior will be assimilated to the inferred behavior of the presented models. In situations where such other-impressions are less important, prior research has found that the own behavior is primarily contrasted with the behavior of the example. The managerial implications of these hypotheses, if confirmed, are that the common use of salient or extreme person models in communication to promote sustainable behavior will probably have beneficial effects if the behavior in question is cast as interdependent, and presented such that the impression of the model influences the impression about the intentions of fellow citizens, but not if it is cast or interpreted as independent. In the latter case, perverse effects of well-meant communication are possible: 'I can not be as green as the GAIA president, so why bother?'

b. Complementary bundles of sustainability goals and commercial products (research in progress)

We briefly mention a further series of studies (Briers, Warlop, en Smeesters, in progress) we recently initiated. Here we examine how and why sustainable and commercial goals can be combined in one bundled offer. We know of two types: a first is when commercial product/brands promise to transfer part of the revenue of the product to a sustainable objective (e.g., to an organization involved in protecting the rain forest). The other type is when organizations asking for donations (e.g., Vredeseilanden / Iles de Paix) offer –nearly worthless- products in 'exchange' for the donation (e.g., a plastic key chain). Prior research has shown both bundles to be attractive, although a sound explanation is still lacking. Some tentative explanations in the literature point to the complementarity of positive and negative feelings engendered by consumption and donation. Product-with-donation bundles are most attractive when the product is of the frivolous kind, presumably because the donation reduces the guilt associated with the frivolous consumption. Donation-with-product bundles are claimed to be attractive because mere donation induces fear of commitment, which is then reduced by casting the transaction as a commercial exchange. In two pilot studies we replicated the latter so-called 'exchange fiction' effect (people are more likely to donate if the donation is 'exchanged' for a zero-utility object, than if they are merely asked to donate). Our broader objective is to achieve an understanding of the underlying psychological

mechanisms, and recommendations for selective application of those marketing techniques in some areas. The results should be of interest to NGO's and to organizations that link sustainable objectives with labels on commercial products (like Wereldwinkels/Magasins du Monde, or Max Havelaar). This work will continue over the next few years, and we will report on it in due time. We have added a very preliminary statement of purpose for this project as appendix 5.

Objective 1C: Comparing priming and argumentation

The classic social marketing approach is to induce contemplation of the negative social or environmental effects of noncompliance, and of the positive effects of compliance. One starting point for our utilization of priming techniques was that contemplation is likely to induce also thoughts about the personal costs and the minimal social benefits of compliance. We expect that, at least under some circumstances, subtle environmental priming would be more effective than thought induction. We (Verhulst, Briers, and Warlop, in progress) ran two pilot studies in search of a paradigm by which the two types of influence could be validly compared, but they have not yet been successful.

Objective 2: Persistence of saliently induced sustainable behavior

A continuing problem for any social marketing effort with the goal to induce compliance with sustainability goals, is that circumstances often require highly obtrusive actions (such as price promotions and penalization threats). As our own prior (PODO1) research showed, a substantial group in the population is not likely to react to sensibilization efforts. The question remains as to whether the more obtrusive and required instigative actions would not hurt the intrinsic motivation of those who would comply anyway. The literature in psychology provides ample evidence that intrinsic motivation to complete a course of action is hurt by the presence of extrinsic reinforcers. We have proposed a broad series of studies to examine ways to circumvent this problem. Apart from some initial pilot testing, we have made no substantial progression on this section of the proposal. We will continue our work, and report in due time.

6. References

We have not added a potentially long list of references to the relevant literature. Extended lists can be found in the reference sections of the papers in appendix. The only references mentioned are from our own project work.

- Briers, B., Warlop, L. and Smeesters D. (in progress), Adding charity to exchange and exchange to charity: in search of a common explanation. – **see Appendix 5**
- Liégeois, A., Corneille, O. and Yzerbyt, V. (in progress), Priming environmental concern using positively and negatively connoted primes. - *see Appendix 3*
- Smeesters, D., Warlop, L., & Van Avermaet, E. (2002). Exploring the Role of Consistency of Social Value Orientation: Temporal Stability, Reciprocal Cooperation, and Forgiveness. Manuscript submitted for publication, Katholieke Universiteit Leuven. - *see Appendix 4*
- Smeesters, D., Warlop, L., Corneille, O., Yzerbyt V. and Van Avermaet E. (2002). About Prisoners and Dictators: The Role of Other-Self Focus, Social Value Orientation, and Stereotype Primes in Shaping Cooperative Behavior, Manuscript submitted for publication, KULeuven – *see Appendix 2*
- Smeesters, D., Warlop, L., & Van Avermaet, E. (in progress). Interpretative Thinking and Impression Formation in a Prisoner's Dilemma Game
- Smeesters, D., Warlop, L., Van Avermaet, E., Corneille, O., & Yzerbyt, V. (in press). Do not prime hawks with doves: The interplay of construct activation and consistency of social value orientation on cooperative behavior. Journal of Personality and Social Psychology. - *see Appendix 1*
- Verhulst, F., Warlop, L. and Briers, B. (in progress), Comparing priming and argumentation as communication devices in promoting prosocial behavior.