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# ECOLOGICAL CONSCIOUSNESS AND BEHAVIOUR EXAMINED

## An empirical study in the Netherlands

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### 1 Introduction

The importance of sociological and socio-psychological analysis of environmental problems is recognized, not only by social scientists, but also by other scientists. In addition, policy-makers are becoming aware of the fact that knowledge of environmental consciousness and behaviour is necessary to improve the environmental quality. In recent publications such as 'Our common future' (WCED, 1987), 'The first global revolution' (King and Schneider, 1991) and in the documents for the UN Conference on Environment and Development (UNCED, 1992) the role of environmental consciousness and behaviour for the solution of global problems is underlined. On the one hand one should know whether people do have environmental consciousness and behave consciously ecologically. On the other hand, insight in the categories of people that have environmental consciousness and behave consciously ecologically, including their motives may give indications for possible policy-interventions.

In the Netherlands a scientific tradition of nearly two decennies exists concerning environmental consciousness-research (Nelissen and Schreurs, 1975; Ester, 1979; Van der Meer, 1981; Nelissen et al., 1987; Scheepers and Nelissen, 1989; Wolsink, 1990; Tellegen & Wolsink, 1992). In the last years attention has been paid to the analysis of environmental behaviour (Van der Meer, 1981; Nelissen et al, 1987; Van de Kruijk, Pieters and Van Raay, 1991; Nelissen and Kok, 1991). This tradition is part of the international scene and international discussion about attitudes and behaviour (Ajzen and Fishbein, 1980; Chaiken and Stangor, 1987; McGuire, 1985). The Netherlands take a leading role in the empirical research of these topics. Nowadays we have a relatively clear insight in environmental consciousness and our knowledge of environmental behaviour is growing.

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In this contribution attention is paid to recent findings concerning environmental consciousness and behaviour in the Netherlands. Four questions are formulated in paragraph 2. The answers are based on data described in paragraph 3. The measurement of environmental consciousness and ecological behaviour is documented in paragraph 4. The analyses and the results of the research are presented in the paragraphs 5, 6 and 7. Finally, conclusions and suggestions are given in paragraph 8.

## 2 Questions

In previous studies we reported on the consistency between attitudes regarding ecological matters (Nelissen and Schreurs, 1975; Nelissen et al., 1987; Nelissen and Scheepers, 1989; Scheepers and Nelissen, 1989). From these studies we concluded that Dutch respondents showed a fairly moderate consistency in their attitudes.

- a. Our present study elaborates on these findings. This means that we now focus not only on the consistency of environmental consciousness, but also on the consistency of ecological behaviour. Would the Dutch show relatively consistent ecological behaviour, if their attitudes had been shown to be so loosely associated?
- b. Our second question relates to the association between attitudes and behaviour. Based on theoretical contributions and empirical findings reported by Fishbein and Ajzen (1976; Ajzen and Fishbein, 1980), we expected to find some consistency between attitudes and behaviour. But would this consistency, so often reported, also exist in the field of ecological matters? Would we be able to distinguish people who behaved to some extent consistent with their attitudes from people who showed inconsistencies between their attitudes and behaviour?
- c. As yet, we assumed that we would discover clusters of people that would differ regarding the extent of consistency between ecological attitudes and behaviour. So, our next question would be: who are the consistent people? But we considered of even greater importance the question: who are the inconsistent people? This consideration was based on the assumption that the latter people might be regarded as crucial categories within the framework of environmental campaigns.
- d. And our last question is related to the social motives that people have to behave (in-)consistent with their attitudes. In previous studies we reported that environmental consciousness was strongly associated with

post-materialistic stances. Would conscious ecological behaviour also be motivated by post-materialism and related ideological stances?

### **3 Sample and data**

The research-data consist of a sample that has been derived from a longitudinal research 'Social and cultural developments in the Netherlands'. In 1985 we interviewed a sample of 3003 persons that had appeared to be representative of the Dutch population (cf. Felling et al., 1987). These people were asked in 1985 whether they would be willing to be re-interviewed. Unfortunately, not all of those who had responded positively to this question, were re-approachable. Some of their addresses had been lost over the years, some had deceased and some had removed. Eventually it turned out that we could re-approach 1033 respondents out of which 683 had been willing to cooperate. This amounts to a response rate of 66% (after elimination of incorrect inclusions) and hence a non-response rate of 34%.

The full panel sample (n=683) appeared to be biased to some extent due to sample attrition regarding the distribution of region and degree of urbanization. But regarding the combination of the characteristics age, sex and marital state, none of the possible categories appeared to be seriously underrepresented in the panel-sample. Hence our final conclusion was that the panel sample, by and large, reflected the original sample of 1985, considering the characteristics tested. For more detailed information on the questionnaire design, the sample design, sample attrition and sample representativeness we refer to Felling, Peters and Scheepers (1992).

Out of these 683 respondents, 350 were questioned on environmental consciousness because they had been interviewed on this theme in 1985. For these 350 respondents we have panel data on the development of their environmental consciousness over a period of 5 years. Thereupon these respondents were also questioned on their ecological behaviour. These questions had not been submitted to them in 1985, unfortunately. Hence, data on ecological behaviour are only available for 1990.

### **4 The measurement of environmental consciousness and behaviour**

Measurements on **environmental consciousness** had been introduced by Nelissen and Schreurs (1975). They considered attitudes pertaining to both the artificial and the natural environment important. Next to these attitudes they distinguished a willingness to make sacrifices for the environment and a willingness to become active for the environment. For each of these dimensions

a number of items was formulated. These measurements have been extensively tested, updated and documented over the years (Nelissen et al., 1987; Felling et al., 1987; Nelissen and Scheepers, 1989; Scheepers and Nelissen, 1989; Felling et al., 1992).

Time and again, this set of items appeared to be both valid and reliable to measure four distinct dimensions, also in 1990-1991: appreciation of the natural environment (2 items, Cronbach's alpha: .50), appreciation of the artificial environment (2 items, Cronbach's alpha: .68), action willingness (6 items, Cronbach's alpha: .78) and willingness to sacrifice for the environment (3 items, Cronbach's alpha: .68). We refer to the publications mentioned above for more detailed methodological information. In this study we will not use the measurement pertaining to the appreciation of the artificial environment. The three remaining scales are considered to be indicators of **ecological consciousness**.

For our present research, new measurements were developed to tap **ecological behaviour**. Due to space limitations within the questionnaire, we had to select a restricted number of topics to cover. We decided to tap respondent's (reported) behaviour regarding: a. household trash; b. consumption of (non-) ecological products; c. energy consumption and d. means of transportation.

ad a. Regarding **household trash**, we asked straightforwardly whether respondents put away their trash (like used batteries, turpentine, empty bottles, paint, left-over medicines) in the ordinary household trash or in special places (like chemical deposits). When respondents put away their trash in special places, we regarded this behaviour as ecologically sound. It appeared that an overwhelming majority of respondents put away their household trash in special places (see Appendix), except for waste from greens and fruits that was put away in special places only by a minority of respondents. These findings are more or less consistent with the findings of Van de Kruijk et al. (1991), who conducted research which is to some extent comparable to our research. We submitted these items to probabilistic scale analysis (Mokken, 1970) to discover consistency on this domain of ecological behaviour. This consistency appeared to be present. The scalability of the items was good (7 items, scalability coefficient (H): .54) as well as the reliability (rho: .74).

ad b. With respect to **consumption of (non-) ecological products**, we asked whether respondents bought all kind of products: some that have proven to damage our ecological environment (plastic bags and cups, chloride to clean) and others that have proven to save our environment to some extent (recycled paper, dairy products in bottles). Respondents showed a wide range of willingness to buy ecologically sound products or to refrain from buying non-ecological products. It appeared extremely difficult to discover behavioural consistency on this domain. Out of 12 items, only 3 items (non-purchase of

fabric softeners and chemicals to refresh toilets; and purchase of recycled paper) displayed a relatively weak consistency (see Appendix, H:.36, rho: .47). Apparently, a majority of respondents do not consistently buy ecological products nor do they refrain from buying non-ecological products.

ad c. Regarding **energy consumption**, we asked whether respondents tried to save on energy (water, heating and lighting) and whether they took energy consumption into account at the purchase of new electric appliances. It appeared that about one out of four respondents tried to reduce energy consumption, which is slightly less than Van de Kruijk et al. (1991) found. Unfortunately, we do not know what kind of motives these respondents had for their behaviour: ecological or economical motives. These items appeared to constitute consistent and reliable measurements (see Appendix: 4 items, Cronbach's alpha: .62)

ad d. With respect to **means of transportation**, we asked by what means respondents usually went to work/school, to run errands, to visit family and friends within and outside of their municipality. To refrain from using the car was considered ecologically sound transportation behaviour. It appeared that about half of the amount of people used their car frequently within their municipality whereas an overwhelming majority used it to visit friends or family outside of the municipality. These findings are consistent with the findings of Van de Kruijk et al. (1991). Again, there appeared to be some consistency in respondent's behaviour, because the scalability of the items was good (see Appendix: 4 items, H: .53) as well as the reliability (rho: .58).

In order to answer our third question pertaining to the **social categories** that perform (in-)consistent conscious ecological behaviour, we will introduce some demographical variables assumed relevant for exploratory purposes on this domain. We expected to find some differences between the sexes and the age categories. Educational level was measured by the highest completed school. Income was cautiously measured by asking for the income (in five categories) before taxes of the household to which the person belonged to. People were classified into social classes by means of a procedure developed for international comparative research by Erikson, Goldthorpe and Portocarero (1979; 1983) and then applied to 35 countries by Ganzeboom et al. (1989). And political vote was constructed by reducing the great number of national political parties to six main streams, ranging from the Green Party on the far left to orthodox confessional parties on the far right.

And in order to answer our fourth question pertaining to the **social motives** to perform, or to refrain from, conscious ecological behaviour, we will introduce some concepts considered predictive in this domain.

First of all, we refer to the concept of materialism versus post-materialism introduced by Inglehart (1977; 1979) and proven to be strongly associated with environmental consciousness as such (Nelissen and Scheepers, 1989). Inglehart's original measurement was fully replicated. Within the context of this study we only used the items on post-materialism that refer to political value priorities like the freedom of speech, a more friendly and personal society and a society where ideas are considered more important than money.

Positively associated with this complex of ideas is the concept of social criticism developed by Felling et al. (1983) which implies striving for equality in society and breaking through traditional power relations. Based on ideas derived from Lipset (1960; 1982), we considered it probable that economic liberalism would also be positively associated with these political ideas. This concept refers to the active involvement of both the government and trade unions to develop policies in order to level differences in opportunities, income and status. But another concept, also derived from Lipset and labelled cultural conservatism (Scheepers et al., 1991) was considered to be associated with non-ecological behaviour because this type of conservatism represents a more traditional view on society and its whereabouts. Two other concepts were also suspected to be associated with non-ecological behaviour, i.e. status anxiety and socioeconomic frustration derived from Scheepers et al., (1990), because these types of feeling might induce people to take account of financial matters and therefore refrain from ecological behaviour that is generally regarded as being more expensive. Finally we introduce political alienation as a concept that might induce indifference and therefore encourage non-ecological behaviour.

All measurements introduced as social motives to perform or refrain from conscious ecological behaviour were derived from previous studies where they had been proven to be both valid and reliable. All scales are extensively documented in Felling, Peters and Schreuder (1987) as well as in Felling, Peters and Scheepers (1992).

## **5 Consistency in ecological consciousness and behaviour**

### **Consistency in ecological behaviour?**

Part of the answer to the question of consistency in ecological behaviour has already been given in the paragraph on measurements. We reported that we found a relative consistency on three domains of (reported) ecological behaviour: to put away household trash, to consume and save energy and to use means of transportation. But it appeared to be very difficult to find consistency regarding the purchase of ecologically sound products or to refrain from purchasing non-ecologically sound products. In order to ascertain the

consistency between these four domains of reported behaviour, we computed Pearson correlations. These are reported in Table 1.

*Table 1: Pearson correlations between measurements on reported ecological behaviour (n = 266, \* = level of significance  $p < .05$ ).*

household trash	1.00			
consumption of ecological products	.16 *	1.00		
energy consumption	.24 *	.18 *	1.00	
means of transportation	.23 *	.18 *	.30 *	1.00

From Table 1 we derive that the consistency between domains of ecological behaviour is fairly modest yet significantly positive, ranging from .16 to .30. The lowest correlations are those between consumption of ecological products on the one hand and on the other hand the other modes of ecological behaviour. The highest correlation is between saving energy and refrain from using the car as means of transportation.

### **Consistency between ecological consciousness and conscious ecological behaviour?**

To ascertain the association between attitudes, i.e. ecological consciousness, and (reported) behaviour, i.e. ecological behaviour, usually Pearson correlations are computed (cf. Fishbein and Ajzen, 1976). We report these in Table 2.

*Table 2: Pearson correlations between measurements on ecological attitudes and reported ecological behaviour (n = 266, \* = level of significance  $p < .05$ ).*

	attitude natur. envir.	offer willing	action willing
household trash	.06	.15 *	.08
consumption of ecological product	.10	.24 *	.23 *
energy consumption	.14 *	.10	.26 *
means of transportation	.14 *	.22 *	.19 *

From Table 2 we derive that this consistency is in all cases positive, again fairly modest and not always statistically significant. The highest correlations are found between action willingness and modes of ecological behaviour (ranging from .19 to .26, except for the correlation with behaviour regarding household trash which does not reach significance); followed by the correlations between offering willingness and modes of ecological behaviour (ranging from .15 to .24, except for saving energy which does not reach significance). The lowest correlations appear to be found between the attitude toward the natural environment and modes of ecological behaviour.



Now, we proposed to search for categories of people who showed relatively consistent ecological behaviour associated with ecological consciousness on the one hand; and on the other hand other categories for which this consistency was lower or even non-existent. It appeared difficult, if not impossible, to derive such categories from analyses of correlations. In order to find such categories we performed analysis of homogeneity by means of which clusters of respondents with more or less resembling response patterns can be detected (Gifi, 1981a; 1981b). We used this method previously to discover people with consistent favourable attitudes towards environmental matters (Scheepers and Nelissen, 1989). We refer to this study for a more elaborate description of the application of this method in this field of research.

Like in this previous study, again we were able to distinguish people that may be considered to be homogeneously within their cluster, and to be heterogeneously between clusters. We found four types of people.

**Type 1: Consistent non-ecologists**

First, we found people with a very low ecological consciousness (tapped by the three measurements introduced above) associated with no ecological behaviour at all. It seemed fair to label these persons as consistent non-ecologists. About 24% of our sample turned out to be in this category.

**Type 2: Inconsistent consciousness-ecologists**

Second, we found people with a moderate ecological consciousness who reported hardly any ecological behaviour. This category appeared to contain 34% of our sample.

**Type 3: Inconsistent behaviour-ecologists**

Third, we found a category of people with a relatively strong ecological consciousness who reported only moderate ecological behaviour, which category appeared to contain 20% of our sample.

**Type 4: Consistent ecologists**

Finally, we found a category of people who showed conscious ecological behaviour, i.e. a strong ecological consciousness, with especially a strong willingness for ecological action, associated with consistent ecological behaviour. That is why we labelled them as the consistent ecologists, which category appeared to contain 22% of our sample.

## **6 Social categories and conscious ecological behaviour**

In order to discover in which social categories the four different types were located, several methodological paths were open to us. In previous studies we used predominantly methods to describe bivariate associations between types of respondents on the one hand and social categories on the other hand, like analysis of correspondence. In this study we meant to eliminate spurious associations between our typology and social categories. For this purpose we had to turn to logistic regression analysis because our dependent variable is merely nominal. But it is usually rather difficult to interpret the parameters of this method. Recently a method has been developed that resolves this problem: regression analysis with nominal variables (RENOVA; Lammers and Pelzer, 1991). It resembles conventional analysis of regression where nominal predictors can be dummyfied and entered in equations next to metric predictors. The main difference is that nominal dependent variables may be included in RENOV A, which is of course a violation of assumptions in conventional analysis of regression. The results of this regression analysis with a nominal dependent variable are presented in Table 3.

Table 3: Analysis of regression with nominal typology and social categories; unstandardized regression coefficients, (n=187, \* = significant, p < .05).

dependent variable	type 1	type 2	type 3	type 4
general mean	24	34	20	22
<b>independent variables</b>				
<b>sex:</b>				
men (reference category)	-	-	-	-
women	1.2	-13.6	11.2	1.3
<b>income before taxes:</b>				
less than f 1500, =	22.2	12.6	-23.6	-11.1
from f 1500, = to f 2500, =	-11.4	16.2	-3.5	-1.3
from f 2501, = to f 3250, =	8.4	-5.9	1.0	-3.4
from f 3251, = to f 5000, =	-4.1	-1.9	2.5	3.5
more than f 5001, =	2.8	-0.3	-1.3	-1.2
<b>social classes:</b>				
higher professionals	-1.0	0.3	1.5	-.9
self-employed people	-14.5	12.4	8.2	-6.1
farmers	8.7	10.9	1.8	-21.5
skilled workers	3.4	-9.5	-3.3	9.4
unskilled workers	5.2	1.1	-10.0	3.8
<b>political vote:</b>				
green party	-24.0	-28.4	15.6	36.8 *
social democrats	-2.0	-9.2	12.0 *	-1.0
progressive liberals	0.2	-1.6	10.6	-9.3
christian democrats	0.9	1.8	-2.6	-0.1
conservative liberals	6.0	11.2	-21.0 *	3.8
conservative christians	-6.9	10.5	-6.9	3.3
education	-2.0	-4.2	2.1	4.4
age	-0.5	-0.5	0.2	0.7 *
explained variance	7.7	8.8	12.6	10.3

In the first row below the dependent variable, i.e. our typology, are the percentages of the categories of this typology, labelled general means (conventionally: intercept). Below these percentages, unstandardized regression coefficients (conventionally: b-coefficients) are presented next to the social categories they belong to. These represent the percentage of people within the category of the nominal predictor as a deviation from the general mean, i.e. the percentage of the typological category concerned, and controlled for by all other predictors in the equation. The last row of this table contains the percentage of

explained variance of each of the categories of our typology. Unfortunately, none of these reach significance. Still there are some significant differences.

#### **Consistent ecologists (type 4)**

Let us start with the category that contains people with conscious ecological behaviour (type 4). First, age appears to contribute to conscious ecological behaviour: the older one is, the greater the chance of displaying this type of behaviour. Second, voters for the Green Party appear to be significantly overrepresented within this category. Although none of the other parameters reach significance, there are two categories worth mentioning. It appears that people with an income before taxes of less than f 1500,= as well as farmers are underrepresented in this category.

#### **Inconsistent behaviour-ecologists (type 3)**

Now, let us proceed with the category of people with a strong ecological consciousness who reported only moderate ecological behaviour (type 3). This may be a crucial category for educational campaigns. It appears that voters for the social democrats are significantly overrepresented within this category, whereas conservative liberals are underrepresented. None of the other parameters reach significance. Yet it seems worth mentioning that people with low income and unskilled workers are underrepresented in this category.

#### **Inconsistent consciousness-ecologists (type 2) and consistent non-ecologists (type 1)**

Within the other two typological categories we found no significantly over-, or underrepresented social categories. Yet, it may be worth mentioning that voters for the Green Party are underrepresented, and people with the lowest incomes are overrepresented in these categories.

### **7 Social motives of conscious ecological behaviour**

In order to discover what social motives respondents have for conscious ecological behaviour, we executed again regression analysis with nominal variables (RENOVA; cf. Lammers and Pelzer, 1991). The results are presented in Table 4.

Table 4: Analysis of regression with nominal typology and social motives; unstandardized regression coefficients, (n=187, \* = significant,  $p < .05$ ).

dependent variable	type 1	type 2	type 3	type 4
general mean	24	34	20	22
independent variables				
post-materialism	0.48	0.56	-1.73	0.69
social criticism	-0.07	0.02	0.06	-0.01
economic liberalism	-0.05	-0.10	0.07 *	0.08 *
cultural conservatism	0.00	0.11 *	-0.09 *	-0.02
statusanxiety	1.43	-2.75	1.91	-0.59
socioeconomic frustration	0.76	-0.36	2.99	-0.340
political alienation	0.10 *	0.00	-0.05	-0.04
explained variance	9.9 *	8.2 *	14.7 *	5.8

In the last row of this table we ascertain that the amount of explained variance reaches significance for three out of four typological categories. Only the category of people with conscious ecological behaviour does not reach significance. Still, behaviour of the latter category (type 4) appears to be motivated by economic liberalism. This also applies to the category of people who showed a relatively strong ecological consciousness but only moderate ecological behaviour (type 3). This category appeared to be negatively motivated by cultural conservatism. The opposite pattern is found within the category of people with a moderate ecological consciousness who reported hardly any ecological behaviour (type 2). They appeared to be negatively motivated by economic liberalism and positively motivated by cultural conservatism. Another significant effect is found in the category of consistent non-ecologists (type 1) who appear to be motivated by political alienation. This may be regarded as an indication of indifference.

Now, all other social motives suspected to be relevant in this context appear to be non-significant but still interesting. Our expectation that conscious ecological behaviour would be motivated by post-materialistic stances turned out to be falsified: this motivation is spurious when controlling for economic liberalism. This also applies to social criticism. This implies that conscious ecological behaviour is more strongly inspired by the 'old-fashioned' left-wing ideology than by the 'new-fashioned' ideology. Finally it seems worth mentioning that neither statusanxiety nor socioeconomic frustration show significant effects on our typological categories.

## 8 Conclusions and suggestions

What are the conclusions of these analyses? Which suggestions can be given to policy-makers based on these conclusions?

First of all it is worthwhile to mention that some forms of ecological behaviour have pervaded every-day-life. Compared to some years ago, now we find a wide range of people reporting some kind of ecological behaviour. The most outstanding example is that an overwhelming majority of people puts away its household trash (like batteries and turpentine) in special places. But we also noted that one out of two respondents reported some degree of ecological transportation behaviour; and one out of four respondents reported some degree of energy saving behaviour. But, referring to our first question on the consistency of the different types of ecological behaviour, we concluded that this consistency is relatively modest, yet significantly positive.

In this context one could ask whether it is permitted to use the term 'ecological behaviour' in a general sense. This question has already been asked by Van der Meer (1981) and recently by Tellegen & Wolsink (1992). Given the relatively independent forms of ecological behaviour, one can say that the term only has a function as a 'catch-word'. Even when we categorize ecological behaviour (for example: household trash-behaviour, consumption of (non) ecological products, energy-consumption, etc.) it seems that within each of these categories the consistencies are limited. This means that it is better to talk about ecological behaviour in terms of differentiated forms of behaviour with ecological aspects. Referring to the relatively high number of people that already behaves ecologically in some sense, one could ask whether we still have to organize campaigns focussing on promoting ecological behaviour. We think that as long as part of the population still behaves non-ecologically, it is worthwhile to look for intervention-strategies. Our suggestion would be that campaigns regarding household trash are in a way redundant, considering the number of people that already reports this type of behaviour; whereas campaigns focussing on energy-consumption and transportation-behaviour might convince a larger proportion of the public to reconsider their behaviour in these respects.

Next we concluded that the consistency between ecological consciousness and ecological behaviour is fairly modest, yet significantly positive. Unfortunately, only a minority of the people behaves consistently with their attitudes. Obviously there are different factors influencing attitudes and behaviour. We know for example the role of limiting factors in the discrepancy between consciousness and behaviour. People with a positive environmental consciousness can find themselves in circumstances that do not allow them to behave ecologically. In this respect we suggest that this consistency might be reinforced by reducing the limiting factors, for example by improving the infrastructure for ecological behaviour.

This leads us to the so-called environmental instruments discussion. Recently there has been a large debate in Holland concerning the use of policy instruments. As the insiders know a distinction is made between different categories of instruments: a. regulation; b. financial incentives; c. social influence and d. physical infrastructure. After a period in which regulation was seen as the most effective way to influence environmental behaviour, nowadays much more attention is paid to the other instruments. Although the empirical research in this field does not give a final answer, it is generally accepted that a so-called instrument-mix is the best way to influence behaviour. Our research-findings are not directly related to this discussion; but -when social influence instruments are introduced- the material does give some indications about the way in which to organize environmental campaigns. But before giving more detailed ideas about the way to work out environmental campaigns, it is worthwhile to make some remarks concerning the relation between social categories and ecological behaviour.

Regarding the social categories that perform conscious ecological behaviour, only the voters for the Green Party stood out. It appeared difficult to find other specific social categories within our four types. In terms of policy-interventions, this might imply that ecological campaigns need not be directed at specific social categories. Instead, they should be developed to address the general public. In other words, no social group should be excluded from ecological campaigns oriented at specific forms of ecological behaviour.

But in accordance with our findings it seems necessary to develop policy-programs and campaigns based on the different types of ecological behaviour. A lot of the policy-programs and campaigns at this moment are not based on this principle; so a modification of the strategy seems necessary. We will give an example. Recently there has been a mass media campaign in Holland under the name 'A better environment begins with yourself'. In television spots and in papers as well as in monthly journals one could see well-known Dutchmen emphasizing the importance of the environment and the need to care for nature and environment. This campaign was evaluated and some of the results were that people really did know the campaign and that there was an improvement of the positive reaction to the environment (NSS, 1990-1992). Unfortunately there were no measurements of environmental behaviour, so the impact of the campaign on behaviour could not be measured. The campaign has not yet been ended, only the first stages were completed. It is foreseen that in the future there will be an orientation towards the presentation of alternatives for non-ecological behaviour. We suggest that campaign-makers should focus on more specific behaviour and give real suggestions for specific behavioural alternatives.

Regarding the social motives to perform conscious ecological behaviour, it appears that this type of behaviour was motivated by liberalism in the classical

sense of the word: an ideological complex strongly prevalent in left-wing political parties, especially among social democrats who aim to level differences in income, knowledge and power. This is not a surprising conclusion, for a lot of studies showed already this relationship. It seems more important to note that consistent non-ecological behaviour appears to be induced by political alienation. Politicians who want to encourage ecological behaviour within the general public should worry about the fact that they will not be heard by non-ecologists. This means that their appeals only have importance for those who are already convinced of ecological ideas. Campaigns organized by politicians do run the risk of being not received by the target-group for which the campaign is meant.

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## Appendix: Measurement constructs

### Household trash

	difficulty	H(i)
Put away household trash in special places:		
- used batteries	.92	.58
- used turpentine	.81	.58
- empty bottles	.92	.48
- left-over paint	.82	.67
- left-over medicines	.91	.46
- waste from greens/fruits	.37	.35

### Consumption of (non-) ecological products

	difficulty	H(i)
buy recycled paper	.33	.40
refrain from buying toilet chemicals	.53	.36
refrain from buying fabric softeners	.67	.33

### Energy consumption

	difficulty
energy consumption important at purchase of electric appliances	.23
reduce use of water	.28
try to save energy on lightning	.27
save energy by lowering central heating	.16

### Means of transportation

	difficulty	H(i)
usually without car:		
visit local friends/family	.59	.51
visit to friends/family elsewhere	.08	.78
run errands	.53	.48

**Legends:** difficulty refers to the percentage of respondents who perform ecologically sound behaviour. H(i) refers to the association of the item with other items in the scale.