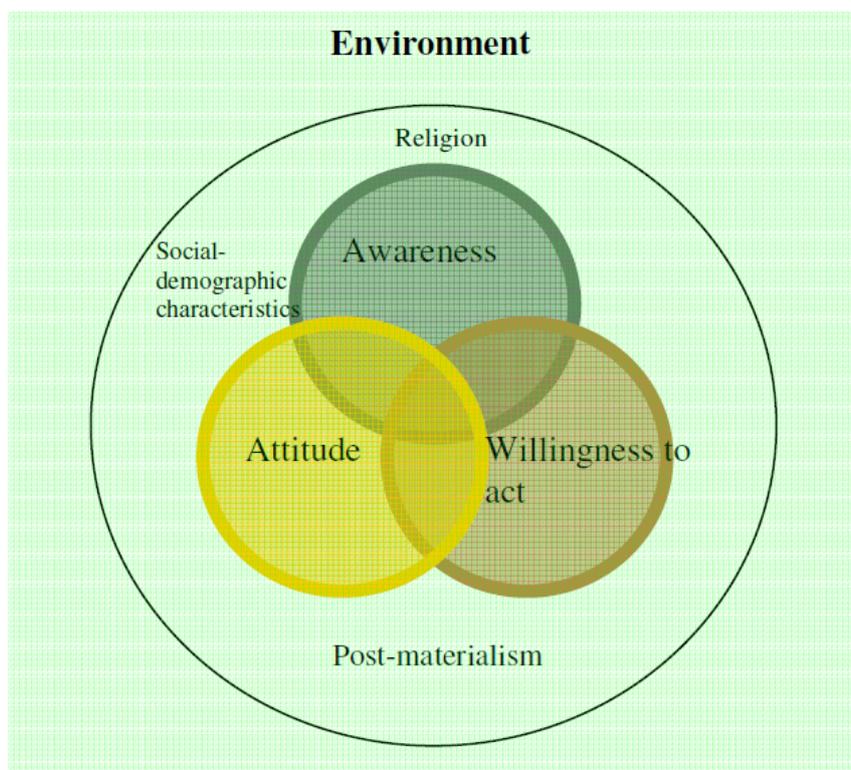


# Aware of the Environment? Or the environment is aware?

An explanation of the environmental awareness, attitude, and willingness to act, with social variables, of students from the Radboud University, Nijmegen.

Extended summary



Radboud University, Nijmegen  
School of Management  
Social and Political Sciences of the Environment  
Bachelor thesis

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## **Introduction**

Humans and the non-human world seem to be facing an 'environmental crisis', unprecedented in human history with the emergence of (global) environmental problems such as global warming, biodiversity loss, deforestation, and air pollution (Barry, 1999, p. 7). Simultaneously, this human generation is the first being aware of its intra- and inter-generational effects on transforming the environment.

Individuals react differently on (environmental) situations due to the influence of personal background, culture, religious context, and more. For social and political environmental sciences, environmental awareness, attitude, and willingness to act are different concepts of the human psyche and behaviour which are imperative to examine, explain, and comprehend. As the adolescent generations will need to continue and (up) take responsibilities for environmental issues and the future of humanity, the question rises whether and how these aspects are pertinent under this group.

### **1. Research aim and question**

As I have studied at both the University of Tennessee, Knoxville (UTK), U.S.A. and the Radboud University, Nijmegen, the Netherlands, this bachelor thesis would have analysed the differences and similarities between the environmental awareness, attitude, and willingness to act of bachelor students from both institutes in the spring of 2008. However, since the response rate from the web survey of the UTK students was significantly lower (only 17 responses) than those of the Radboud University (172 valid entries), I only examined bachelor students of the latter institute. Furthermore, the study aimed at explaining such levels by postulating they are partly determined by a number of social and personal background variables such as post-materialism, religion and social-demographic characteristics.

The aim was 'translated' into a main question, namely:

*How can differences and similarities in the levels of environmental awareness, attitude, and willingness to act of bachelor students from the Radboud University in Nijmegen be explained?*

### **2. Theoretic framework**

A literature study on theories and hypotheses regarding the environmental concepts was conducted to construct a (temporary) conceptual model functioning as a guideline for the empirical research. First, the concept 'environment' was operationalized as a social construction in which the material dimension to the construction of the environment refers to the real, material, physical production, and the human transformation of the environment. The latter, as there is substantial evidence that humanity has an impact on the natural environment, for instance, shown with the phenomenon global warming. *Environmental awareness* referred to the general knowledge one holds with regards to the environment, environmental issues, and the effects of behaviour on the environment. Furthermore, *environmental attitude* denoted to the degree to which a person has a favourable or unfavourable attitude towards the environment. *Willingness to act* was used instead of the more commonly term 'behaviour' as one can possess a positive or negative willingness to act for the environment, but may lack the capacity or possibility for the actual behaviour. Furthermore, a distinction was made between *direct* and *indirect* environmental willingness to act, referring to the willingness to act of the individual and to what one directs on others (what another should do) (European Commission, 2008; Roosendaal and Poiesz, 1987).

Theories of Ajzen (1991); Dunlap, Gale, and Rutherford (1971); Hand and Van Liere (1984); and Van Meegeren (1995) were used to illustrate the relations of the concepts with different social variables which may influence the environmental awareness, attitude, and willingness to act. The well-known '*expectancy-value-model*' of Ajzen, and later of Fishbein, presented in 1976, was examined as well as

the critiques upon it. Additionally, Van Meegeren's model (1995) was taken into account since it is one of the most recent and accurate models existing in the field and takes the deficiencies and problems into account of previous models, including that of Ajzen. Van Meegeren includes the following variables within his model: intention, subjective norm, and attitude towards behaviour (or, willingness to act). Additionally, Van Meegeren argues that those variables are influenced by a number of others, namely: the actual behavioural prescriptions; social norms; actual behavioural consequences, with a. for environment and b. for the individual; actual behavioural possibilities, with a. provisions and b. Capabilities; the environmental awareness and awareness of responsibilities; and finally, the extended perceived behavioural possibilities, with a. provisions and b. capabilities.

Former research illustrated that certain specific variables influence the levels and differences of environmental awareness, attitude and willingness to act, such as post-materialism, economic aspects, lifestyle, religion, and social-demographic variables such as gender and age. As such, this study constructed a conceptual model with an extended 'Van Meegeren's model'. *Religion and social demographic characteristics* (including *gender, age, ethnicity, the level of parents' education, year of education, and kind of study*) are the starting points, influencing the other variables. Subsequently the model shows *cultural values and ideas* (including *post-materialism*), *political affiliation, economic conditions, and environmental conditions* (local, national, global levels). *Lifestyle, individual aspects, and emotional response* were incorporated into the other variables as they are hard to measure individually (Dunlap, Gale, and Rutherford, 1971; Olofsson and Ohman, 1998; Wishart, 2005).

This theoretic framework was used with the empirical research and thereafter, with the information of the study results, the model was revised and displayed in *Figure 1. Revised Conceptual Model*.

### **3. Methods**

An online web survey was carried to measure the levels of student's environmental awareness, attitude, and willingness to act as well as post-materialistic, religious, and social-demographic variables. The survey consisted of 37 questions, which eventually 172 out of 250 bachelor students from different studies filled out completely between May 30, 2008 and June 12, 2008. Email invitations were sent through the blackboard system of the university.

The results were exported into, and analysed through, the SPSS computer programme. Almost all of the response options were coded in ascending numerical order starting from one (1) and increasing from right to left or top to bottom, depending on the format of the item. The answers which reflected high awareness, a more positive attitude, a high score on willingness to act, and a more post-materialist view were rated as the highest value. Questions where rating was unimportant and lacked just one, correct answer (e.g. political views), were hierarchically rated, starting with one (1) and for 'don't know/no opinion' either zero or the highest rate possible was used. The item's percentages were calculated by cross-tables and most of their correlations calculated with the parametric Pearson's product-moment coefficient (1-tailed). The Spearman's rank coefficient (or Spearman's Rho), which is non-parametric, was used to calculate the correlations with *gender* due to its nominal scale. Items with a low response rate or with an open response option were eventually not included in the SPSS data due to their minor importance, time constraints, and the difficulty of manual coding (Moors, 2007; Smitt, P, 2003; SPSS, 2007).

### **4. Results and conclusion**

The SPSS analyses showed that the bachelor students of the Radboud University are generally quite *environmentally aware*. However, with multiple-choice questions, not all students were able to answer correctly. Furthermore, it became apparent that although the students are generally quite aware of global environmental problems such as climate change, they feel generally uninformed about health impacts of chemicals used in everyday products.

The results illustrated that students generally contain a moderate positive *attitude* towards the environment and find the protection of the environment important. Additionally, most students consider that environmental protection must be given priority over the competitiveness of the economy and/or is a motivation to innovate. Interestingly, the study demonstrated that slightly more than half of the students consider that the best way to evaluate the progress of a country should be equally based on social as well as environmental indicators. Although students tend to position individual's responsibility on protecting the environment as quite high, they also find that the government should regulate environmental issues.

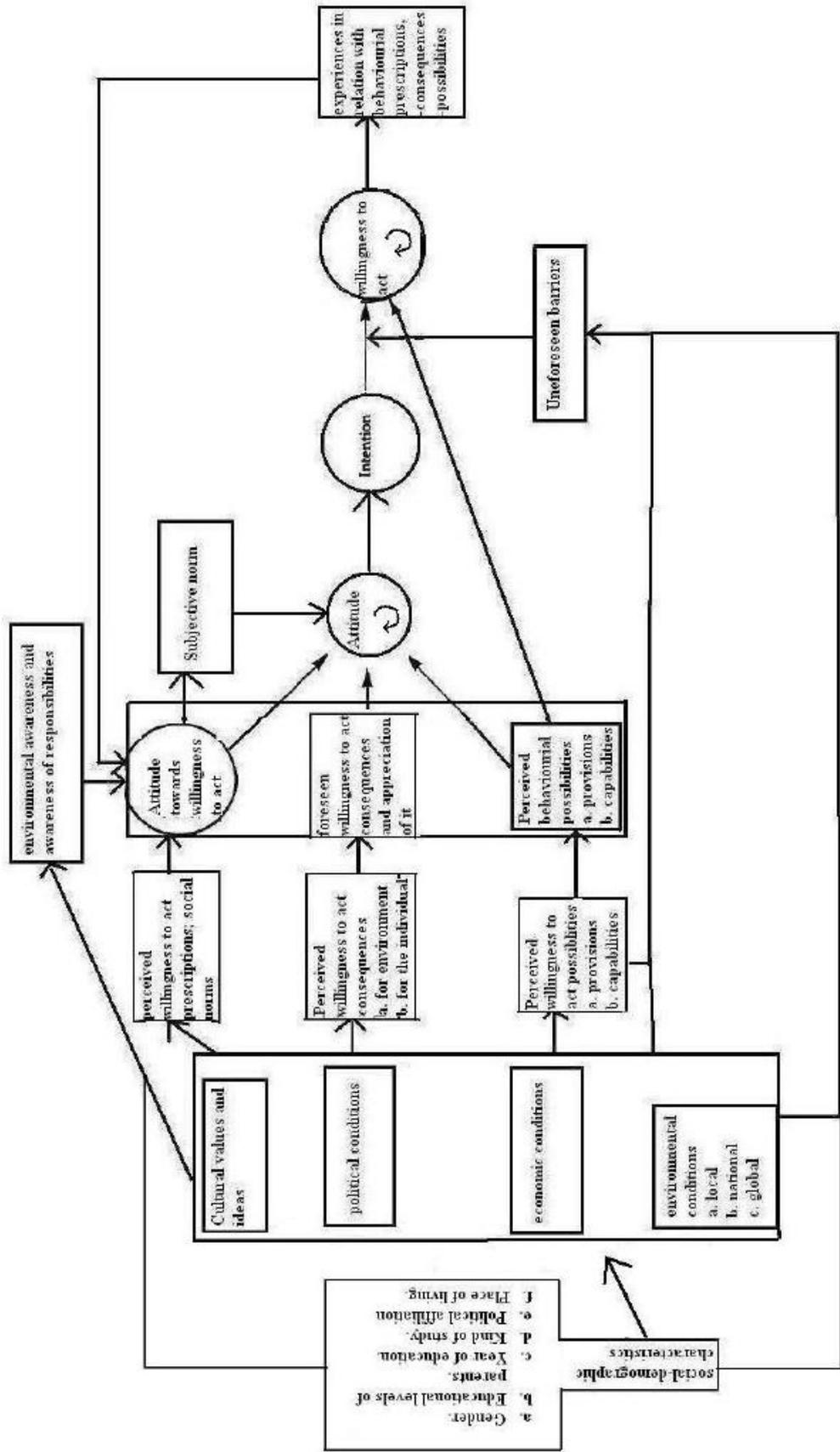
The survey illustrated that the questioned students are more likely to show their *willingness to act* passively in favour of the environment, such as choosing an environmentally friendly transportation mode. Furthermore, only a small percentage of the population answered that they did not do much for the environment in the past month of the questionnaire.

Not surprisingly, the results showed that the three concepts seem to correlate with one another: those more *aware* of environmental issues, tend to contain a more positive *attitude* towards the environment and in presence of the latter, also the *willingness to act* is generally higher. Less clearly was the correlation between *awareness* and *willingness to act*.

It became apparent that those with a more *post-materialistic* view, are more likely to be *aware* of environmental issues than those with a more materialistic view. As such, this variable continued to be incorporated in the conceptual model. According to the results, *religion* does not seem to influence the environmental concepts much and was therefore excluded from the conceptual model. Contrastingly, the analysis demonstrated that certain *social-demographic variables* seem to have significant affects on the environmental concepts of the students in differing levels. *Gender, the educational level of the parents, kind of study major, political stance, and place of living* remained in the conceptual model due to their level of influence. However, *year of education* and *age* were excluded as the results illustrated a significantly low influence on the three environmental concepts.

Although this bachelor research had a significant response rate (172) and the results were analysed significantly, further research would be necessary to formulate accurate and reliable statements about the outcomes of the study and the conceptual model. The conclusions and statements can however be used as a blueprint for further research when, for instance, one wants to generalize and explain the environmental awareness, attitude, and willingness to act of students or even citizens. Finally, this research may even be (and has been) constructive to formulate successful environmental policies aiming at solving adolescent generations.

Figure 1. Revised Conceptual Model



## References

Ajzen, I. (1991). *Theory of Planned behaviour*. Amherst: University of Massachusetts.

Barry, J. (1999). *Environment and Social Theory*. New York: Routledge.

Dunlap, R., Gale, R.P. and Rutherford, M.B. (1971). *Concern for Environmental Rights Among College Students*. Honolulu: Pacific Sociological Association.

European Commission, special Euro barometer. (2008). *Attitudes of European citizens towards the environment*. Brussels: European Commission.

Hand, C. and Van Liere, K. (1984). *Religion, Mastery – Over – Nature, and Environmental concern*. NC: The University of North Carolina Press.

Van Meegeren, P. (1995). Hoofdstuk 2. Achtergronden van milieugedrag. *Milieuvoorlichting. Model voor planmatige voorbereiding*. Amsterdam: Boom.

Moors, G. (2007). *Testing the Internal Validity of the Inglehart Thesis by Means of a Latent Class Choice Model*. Tilburg: Tilburg University. Find date: June 2008 on <http://asj.sagepub.com/cgi/content/abstract/50/2/147>.

Olofsson, A. and Ohman, S. (1998). *General believes and environmental concern. Translatic Comparisons*. In: Environment and Behaviour. SAGE Publications.

Smitt, P. (2003). *Statistiek. Een inleiding voor het hoger onderwijs*. (McClave, J.T., Benson, P.G. and Sincich, T., Trans). Amsterdam: Pearson Education Benelux.

SPSS: *User's guide*. (2007). Chicago: SPSS.

Roosendaal, C. and Poiesz, T. (1987). *Milieu en consumentengedrag: een literatuuronderzoek*. Den Haag: Stichting Wetenschappelijk Konsumentenaangelegenheden.

Wishart, R. (2005). *UTK students' environmental awareness, attitude and behaviour*. TN: University of Tennessee, Knoxville.