

ENVIRONMENTAL SOCIAL PSYCHOLOGY

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Summary

Environmental problems are the result of human behaviors. Their solution therefore rests on changing these behaviors. One way of changing behaviors consists of changing attitudes. In this respect, general environmental attitudes should be distinguished from more specific attitudes that are expressed in behaviors like recycling or family planning. There are different attitude scales that measure general environmental attitudes. The results obtained from these scales as well as from public opinion polls show that, in general, environmental attitudes are very positive. How come, then, the behaviors expressed are not more congruent with the underlying attitudes? Three types of reasons can explain this discrepancy: the way attitudes are measured, and personal and situational factors. This does not mean that efforts made to change attitudes are in vain. On the one hand, general environmental attitudes must be reinforced both from an intra- and from an inter-attitudinal point of view. On the other hand, new behavioral attitudes must be created. In both cases, there are approaches and strategies to attitude change that have proven value. But for the intervention to be successful, one must well identify

the social actors to whom they must be applied and the behaviors that should be targeted.

1. Introduction

By their behavior, humans are responsible for environmental problems. A solution to these problems needs to rest on changing human behaviors. But certain humans are more responsible than others and certain actions are more detrimental than others. Having identified those persons and actions, we have to ask ourselves how it is possible to change the behaviors in question and to intervene accordingly.

There are relatively few solutions available. Among them is the possibility of changing attitudes. In fact, two-thirds of all the publications on environmental psychology rely on the notion of environmental attitude. We shall therefore successively define the concept of attitude, indicate how environmental attitude has been measured up to now, report the results obtained from such measurements, examine the question of a possible link between attitude and behavior, present various models that illustrate this attitude-behavior link in relation to other variables, and, finally, discuss the question of how attitudes can be changed.

2. Attitude

2.1. Concept

From early on, social psychologists have shown an interest in attitudes. They first invented ways to measure attitudes before testing numerous theories about the development and changing of attitudes. The reason they found attitudes so interesting to study is that they were convinced of a causal relationship between attitudes and behavior. That is understandable if we consider that an attitude is an explicit or implicit favorable or unfavorable evaluation of an entity, the attitude object, that is, any entity towards which a person formulates a judgment. In the case of environmental resources, water conservation, pollution of the environment, conservation of energy, recycling, etc. are all attitude objects. An attitude need not be conscious to influence behavior. An attitude can give rise to cognitive, affective, or behavioral responses. The cognitive responses of an attitude are “beliefs.”

A belief is made up of the attitude object, an attribute, and the link between the two whose strength and tense is variable. Thus, one could at different times entertain the following belief: “Recycling is costly” or “Recycling will be costly” or “Recycling could be costly.” Knowledge is a particular kind of belief, a belief recognized as true by virtue of an established criterion.

The affective component of an attitude refers to feelings, moods, or emotions experienced in relation to the attitude object. An attitude being an evaluation, we must not confuse evaluation with affect. An attitude is not always accompanied or not by an affect, or by beliefs. The same goes for the behavioral response that refers to an overt action toward the attitude object as well as intentions to act. Attitudes are not innate; they are learned and, with time, tend to become relatively stable and difficult to change.

2.2. Measurement

Attitudes cannot be observed directly. They are known by one or by a combination of the three classes of response described above: cognitive, affective, or behavioral. Most of the time, the measurement of attitudes rests on verbal reports given by individuals asked to indicate in one way or another if they agree with a number of statements of an attitude scale. This means that researchers have essentially relied on beliefs to measure attitudes. One of the drawbacks of relying on attitude scales is the possibility of inducing individuals to make up answers on the spot to questions that are not really important to them. Relying on open questions circumvents this problem and makes sure the attitude is authentic. In this way, it is possible to know the number and content of beliefs an individual has.

2.3. Measurement of Environmental Attitudes

Environmental attitudes have been obtained either by the use of questionnaires especially devised for public opinion polls or by using standardized measurement that allows an easier comparison of different studies. Maloney and Ward gave us the first measurement scale, the Ecological Attitude Scale. In order to change behavior, it is important, according to these authors, to know what the public knows about ecology, the environment, and pollution, what their attitude is regarding these, which commitments they are ready to make, and which commitments they do make. Their scale is therefore composed of four sub-scales whose object is the measure of these different aspects. The “verbal commitment” (V.C.) sub-scale measures what individuals indicate they are ready to do with regard to environmental questions. For example, using their bicycle or public transport instead of the family car in order to reduce air pollution. The “actual commitment” (A.C.) sub-scale measures what the individuals actually do; for example, write to one’s member of parliament to communicate personal worries about a specific pollution problem. The “affect” (A) sub-scale measures the degree of individuals’ emotionality related to ecological issues. A typical item of this sub-scale reads: “When I think of the way industries are polluting, I get frustrated and angry.” Finally, the “knowledge” (K) sub-scale measures specific factual knowledge related to ecological issues. For example, an item of this sub-scale aims to verify if individuals can correctly find the right answers among those proposed as the most common pollutants of water.

For Dunlap and Van Liere, the traditional and dominant vision of the world that rests on individualism, laissez-faire, progress, and growth belongs to a paradigm that is in contradiction with the “new environmental paradigm” (NEP), which is more sound, human, and ecological. It is a paradigm that emphasizes a necessary harmony between humans and their planet. They have built a 12-item scale measuring this new environmental paradigm; it contains items like “We are approaching the limit of the number of people the Earth can support” or “Mankind is severely abusing the environment.” Dunlap and Van Liere have also built a scale to measure the dominant social paradigm (DSP) with the goal of checking out the opposition between the DSP and the NEP. This new scale has eight dimensions: (1) commitment to limited government, (2) support for free enterprise, (3) devotion to private property rights, (4) emphasis upon individualism, (5) fear of planning and support for the status quo, (6)

faith in the efficiency of science and technology, (7) support for economic growth, and (8) faith in future abundance.

Weigel and Weigel have proposed another scale, the Environmental Concern Scale, composed of 16 statements that respondents must evaluate using a five-point Likert scale. Here are a few examples of these items: “Pollution is not personally affecting my life”; “Courses focusing on the conservation of natural resources should be taught in public schools”; “Even if public transportation was more efficient than it is, I would prefer to drive my car to work.”

Do the scales that seek to measure environmental concern actually measure the same thing? What emerges when we consider them in light of the definition given previously of the concept of attitude? Concerning the three classes of attitudinal expression mentioned previously (cognitive, affective, and behavioral), we notice that these different expressions of an attitude are present in the scales described above. However, this is not the case with other measurement where one or other of these different expressions is lost. Moreover, certain expressions can take more importance, even if all of them are present. With regard to behavioral expression (behavior intent and behavior), when the goal is to measure behavior these scales, because of the way they are built, only allow us to apprehend behavior as it is reported.

The intra-attitudinal structure of the existing scales is rather weak. Even when the scale comprises many items, few dimensions are retained. Consequently, these scales do not inform us properly on the dimensional complexity of the attitude and the degree of integration of different dimensions (e.g. importance, probability, eminence). As for the inter-attitudinal structure, it can be considered from a horizontal or vertical point of view. In the first case, we would like to know which same-level attitudes are related. For instance, it has been shown that although there is an important correlation between attitudes concerning natural resources and pollution the attitude to population issues is not related to them. The question of the vertical inter-attitudinal structure refers to the problem of the specificity of attitudes and the interrogations it can elicit. For example, is there a logical relation between general attitudes and specific attitudes so much so that the former could generate the latter by simple deduction? Are more specific attitudes necessarily more consistent with general attitudes? What are the determining values in the case of the environment? To the first two questions, we can answer that research shows that it is risky, to say the least, to infer the existence of more specific attitudes on the basis of a general attitude of environmental concern.

The relation between environmental concerns and values has been studied in particular by Stern and his associates. They find that three values are associated with environmental concern: egoistic, altruistic, and biospheric. The goal of the first value is to maximize personal well-being, the second value expresses worry for what might happen to others, while from the third value stems a preoccupation for the future of our ecosystem broadly speaking. Bunting and Cousins identify three other values: (1) pastoralism, which is “a positive response to natural environments,” (2) urbanism, which is “a broad attraction to the human-made environment and to complexity and diversity of city living,” and (3) environmental adaptation, which is “an optimistic lack of concern about human intervention in the natural environment along with a belief in

the right of humans to use technology to adapt and dominate nature.” In the framework of research on values in general, Schwartz and his associates have found that values can be regrouped in 10 broad categories, some, like universalism and benevolence, being more compatible with environmental concern than others, like power and achievement, which are particularly evident in Western cultures.

The data gathered by the different scales and by public opinion polls have been able to demonstrate, especially in the United States, that there is a strong environmental concern. The population, in general, has a favorable attitude toward the protection of the environment, although this attitude has fluctuated since the end of the 1960s. By comparing data obtained in 1972 and 1990, it was found that a higher degree of concern for problems of the environment was present in 1990. Although this question was not perceived as the most important, the data show that the number of those who, from 1972 to 1990, perceived these problems as serious increased continually. They also felt more and more threatened by this situation. This was also expressed in the support given to the action of the government. When having to choose between the protection of the environment and economic growth, respondents did not hesitate to show their preference for the first option. They also indicated that they were more ready to pay the costs associated with the different measures taken to protect the environment. Thus, in an opinion poll carried out in 1992 two-thirds of the Americans interviewed indicated that they believed that “environmental problems are so important that solutions must be found regardless of the cost.” Environmental concern, whichever way we look at it, seems to be an attitude that has taken hold. Some studies find demographic differences while others don't.

3. Attitude and Behavior

Are those favorable environmental attitudes accompanied by consistent behavior? In the case of the environment, as with other attitude objects, we often find that the answer to that question is no. Many reasons have been put forward to explain the often weak relationship observed between attitudes and behavior. These can be classified into three categories: (1) the measurement, (2) the person, and (3) the situation.

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Bibliography

- Ajzen I. (2001). Nature and operation of attitudes. *Annual Review of Psychology* **52**, 27–58. [Covers the conceptualization of attitude, attitude formation, attitude structure, and the attitude-behavior relation.]
- Eagly A.H. and Chaiken S. (1998). Attitude structure and function. *The Handbook of Social Psychology*, Vol. 1 (ed. D.T. Gilbert and S.T. Fiske), pp. 269–322. Boston, Mass.: McGraw-Hill. [Exhaustive

presentation, *inter alia*, of questions related to the conceptualization of attitudes and their intra-attitudinal and inter-attitudinal structure.]

Environment & Behavior [Major journal publishing research in environmental psychology.]

Journal of Environmental Education [Major journal publishing research in environmental psychology.]

Journal of Environmental Psychology [Major journal publishing research in environmental psychology.]

Oskamp S. (2000). A sustainable future for humanity? How can psychology help? *American Psychologist* **55**, 496–508. [First of a series of articles published in this special issue of *American Psychologist* dedicated to psychology's contribution to the survival of our planet.]

Petty E. and Wegener D.T. (1998). Attitude change: multiple roles for persuasion variables. *The Handbook of Social Psychology*, Vol. 1 (ed. D.T. Gilbert and S.T. Fiske), pp. 323–390. Boston, Mass.: McGraw-Hill. [Exhaustive presentation of theories on change of attitudes.]

Prieto J.M., Sabourin M., Walker L.E.A., Aragonés I., and Amerigo M. (2000). Applied social psychology. *International Handbook of Psychology* (ed. M.R. Rosenzweig and K. Pawlik), pp. 497–525. London: Sage. [The last part of this chapter is devoted to a state-of-the-art presentation on environmental psychology.]

Stern P.C. and Aronson E., eds. (1984). *Energy Use. The Human Dimension*. New York: Freeman. [This book, commissioned by the National Academy of Sciences, emphasizes the importance of seeing energy problems in terms of social systems.]

Stern P.C. and Oskamp S. (1987). Managing scarce environmental resources. *Handbook of Environmental Psychology*, Vol. 2 (ed. D. Stokols and I. Altman), pp. 1043–1088. New York: Wiley. [Allows readers to better classify the research on environmental attitudes among the corpus of research in psychology that deal with the conservation of environmental resources.]

Wood W. (2000). Attitude change: persuasion and social influence. *Annual Review of Psychology* **51**, 539–570. [Excellent presentation of the change of attitude concept, illustrated with a few cases dealing with environmental problems.]

Biographical Sketches

Michel Sabourin, Ph.D., has been affiliated with the Department of Psychology of the University of Montreal since 1970. His past major research interests were in the area of altered states of consciousness and suggestibility, both in human and animals. His present interests involve the applications of social psychology and the ethics of the research process. Since 1985, Professor Sabourin has pioneered in Quebec the development of legal psychology in research and professional practice; he has acted as consultant for jury trial preparation in over 25 criminal cases; and he has testified as expert witness in both Canada and the USA. Twice president of the Quebec College of Psychologists (1982–1985, 1992–1994), and president of the Canadian Psychological Association (1989–1991), he served as chair of the organizing committee for the 26th International Congress of Psychology held in Montreal, Canada, in August 1996. A past editor of the *International Journal of Psychology* (1988–1992), he has been a member of the executive committee and treasurer of the International Union of Psychological Science (IUPsyS) since 1992. He is the author of numerous scholarly publications (over 50 articles, book chapters, and books) in different areas of psychology and has made over 75 presentations at major national and international congresses.

His publications include *Moving towards a global psychology: Changing theories and practice to meet the needs of a changing world* (1996; *American Psychologist* **51**; with V. Mays, J. Rubin, and L. Walker); *Advances in Psychological Science: Volume 2: Biological and Cognitive Aspects* (with F. Craik and M. Robert); and *Applied Social Psychology* (with J. Prieto, L. Walker, J.I. Aragonés and M. Amerigo), *The International Handbook of Psychology* (2000).

Luc Lamarche, Ph.D., has been professor of psychology at the University of Montreal since 1972. His main research interest is experimental and applied social psychology, and particularly attitude change, decision making, and judgment (legal, medical, personal). He also teaches a course on environmental psychology. In 1998, he was the joint recipient of a Special Award given by the Minister of Education of

Quebec for the publication of a textbook in social psychology, *Psychologie Sociale* (with L. Bédard and J. Déziel. Montréal: Éditions du Renouveau Pédagogique, 1998).

Other noteworthy publications include *Judicial Decision Making: Court of Appeal* (Ottawa: National Judicial Institute, 2001); *Prise de décision et communication patient-médecin. La Communication Patient-Médecin.* (ed. M.-T. Lussier and C. Richard. Boucherville: Gaétan Morin Éditeur); and *Psychologie Sociale* (with D.G. Myers. Saint-Laurent: McGraw-Hill).

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