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ATTITUDINAL TYPES CONCERNING ENVIRONMENTAL PROBLEMS

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One important psychological aspect of environmental problems is the existing attitude structure. The current debate gives an impression that people are really concerned about environmental deterioration and that very few totally ignore it.

Edvardsson (1974) investigated the dimensionality of attitudes toward environmental problems by conventional R-factor analysis. The present study involves a typological approach for part of the same data. The problems were: (a) what types of individuals are there with respect to attitudes toward environmental problems? (b) what characterizes these types in terms of other relevant variables?

The study was limited to those environmental problems associated with pollution, destruction and consumption of natural resources, motorism and urbanization. A mail questionnaire was constructed on the basis of studies of the environmental debate. A systematic sample over age with $N=314$ was taken by the Swedish National Bureau of Statistics from the entire Swedish population between 15 and 75 years old. The response rate was 73% ($N=229$). The respondents were shown to be statistically roughly representative for the relevant part of the population with respect to certain background variables, but this does not necessarily mean psychological representativity. A local sample with $N=31$ responding environmental activists was used as a comparison group. Data collection was performed during April-May 1972 for both samples.

The questionnaire contained 75 attitude statements with a Likert-type five-step response scale: Wholly disagree (1), Hesitantly disagree (2), Undecided (3), Hesitantly agree (4), Wholly agree (5). Eleven statements were eliminated from analysis because of extreme skewness. A program for linear typal analysis, described by Overall & Klett (1972), was used for studying problem (a). This method assumes that underlying any heterogeneous group of individuals are a few basic pure types. Each individual receives a statistical weight in each of several orthogonal types and is assigned to the type where he receives the highest weight. A mean profile for raw scores is computed for each type. Because of program restrictions only half the sample ($N=115$) was analysed.

Linear typal analysis of 64 attitude statements gave two types: type I ($N=68$) and type II ($N=47$). The mean profiles for the types made it possible to describe them. Example of highly discrimina-

ting statements are (means on the Likert scale within parenthesis):

"Much of the talk about environmental destruction is exaggerated." ($M_I = 1.57$, $M_{II} = 2.85$)

"The local authorities are too lenient against environmentally dangerous industries." ($M_I = 4.28$, $M_{II} = 3.11$)

"Some scientists frighten people unnecessarily by talking about dangerous environmental poisons." ($M_I = 2.07$, $M_{II} = 3.55$)

"Migration from rural districts to the cities should continue if it favours Sweden's economy." ($M_I = 1.43$, $M_{II} = 2.40$)

"Traffic noise should be decreased even if the car-owners have to pay for it." ($M_I = 4.21$, $M_{II} = 3.19$)

"We should be more sparing in our use of natural resources like coal, oil and metals." ($M_I = 4.19$, $M_{II} = 3.02$)

Type I respondents seemed to be more concerned than type II respondents. Type I gave environmental problems higher priority, was more critical against authorities, industry, city growth and motorism, more restrictive against economic growth, more worried about the future, and demanded more information and public influence than type II.

The Euclidean distances were computed between each member of the group of environmental activists and the mean 64-variable profiles for the types. The number of activists classified into type I was 28, only 3 were classified into type II. This constitutes an external validation of the typology.

The typology was crosstabulated against 46 other variables from the same questionnaire, which were in dichotomous or trichotomous form or were transformed into such form according to the principle of equal category frequencies. A chi-square test was applied to each cross-table ($\alpha = .01$). Type I was more interested in environmental problems ($\chi^2 = 31.3$, $df=2$, $p<.0001$) and in citizen participation in general ($\chi^2 = 15.7$, $df=2$, $p<.001$). Type I also had greater knowledge about environmental problems, as measured by a 12-item additive index ($\chi^2 = 11.3$, $df=2$, $p<.01$), and was more prepared to accept different kinds of measures (e.g., stronger laws), as measured by an 8-item additive index ($\chi^2 = 31.2$, $df=2$, $p<.001$). Type I was more worried about environmental destruction ($\chi^2 = 22.9$, $df=2$, $p<.001$), and about food additives ($\chi^2 = 23.0$, $df=2$, $p<.001$), but for traffic accident risks there was no significant difference. Eleven questions about annoyance from environmental factors gave only two significant differences, namely for traffic crowding ($\chi^2 = 19.7$, $df=2$, $p<.001$) and ugly landscape ($\chi^2 = 17.7$, $df=2$, $p<.001$).

S-13

ATTITUDINAL TYPES CONCERNING ENVIRONMENTAL PROBLEMS

M-ES

The questionnaire also included various questions about actions and action tendencies. Type I respondents, according to their own ratings, received more information about environmental problems from books ($\chi^2 = 16.3$, $df=1$, $p<.001$), from radio and TV ($\chi^2 = 9.0$, $df=1$, $p<.01$), and from newspapers ($\chi^2 = 9.0$, $df=1$, $p<.01$) than type II respondents. Type I talked more about environmental problems with friends and relatives ($\chi^2 = 17.2$, $df=1$, $p<.001$), encouraged others to read more ($\chi^2 = 13.9$, $df=1$, $p<.001$) and to listen to radio and TV programmes ($\chi^2 = 17.2$, $df=1$, $p<.001$) about environmental problems. Type I had boycotted environmentally dangerous consumer goods to a higher extent ($\chi^2 = 36.5$, $df=2$, $p<.001$) and were more willing to complain to authorities ($\chi^2 = 29.2$, $df=2$, $p<.001$), and more willing to work politically ($\chi^2 = 13.1$, $df=2$, $p<.01$) concerning environmental problems. Type I also volunteered more free comments in the questionnaire ($\chi^2 = 10.6$, $df=2$, $p<.01$). As for background variables - degree of urbanization for dwelling, income, occupational level, educational level, age, sex - negligible chi-square values were obtained.

These results suggest that there may be important psychological and behavioural correlates, but not demographic ones to the two attitudinal types. The results should not be interpreted to mean that attitudes is the most important factor in shaping behaviour. Influence probably also goes in the opposite direction, and there are other individual factors and conditions in the social and political structure that influence behaviour. The results also suggest that annoyance from certain environmental factors is more influenced by the two attitudinal types than annoyance from other factors - a problem for further investigation. Further research should also be aimed at finding personality correlates for the two types and probe the possibilities of changing peoples' attitudinal type by means of information, training, participation in activities, etc.

References

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