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New Ecological Paradigm (NEP) Scale

The New Ecological Paradigm scale is a measure of endorsement of a “pro-ecological” world view. It is used extensively in environmental education, outdoor recreation, and other realms where differences in behavior or attitudes are believed to be explained by underlying values, a world view, or a paradigm. The scale is constructed from individual responses to fifteen statements that measure agreement or disagreement.

The New Ecological Paradigm (NEP) scale, which is sometimes referred to as the revised NEP, is a survey-based metric devised by the US environmental sociologist Riley Dunlap and colleagues. It is designed to measure the environmental concern of groups of people using a survey instrument constructed of fifteen statements. Respondents are asked to indicate the strength of their agreement or disagreement with each statement. Responses to these fifteen statements are then used to construct various statistical measures of environmental concern. The NEP scale is considered a measure of environmental world view or paradigm (framework of thought).

History of the NEP

The roots of the NEP are in the US environmental movement of the 1960s and 1970s, inspired by the publication of Rachel Carson’s *Silent Spring*. Social psychologists hypothesized that the prevailing world view of the population, called the dominant social paradigm (DSP), was changing to reflect greater environmental concern. Developing valid and reliable measures of the environmental world view would help scholars better understand the trajectory of these changes and their relationship to

demographic, economic, and behavior change in the US population.

Among the various efforts to measure such change, Riley Dunlap and colleagues at Washington State University developed an instrument they called the New Environmental Paradigm (sometimes called the original NEP), which they published in 1978. The idea was that this instrument could measure where a population was in its transition from the DSP to a new, more environmentally conscious world view, a change that the NEP scale developers thought was likely to happen. The original NEP had twelve items (statements) that appeared to represent a single scale in the way in which populations responded to them.

The original NEP was criticized for several shortcomings, including a lack of internal consistency among individual responses, poor correlation between the scale and behavior, and “dated” language used in the instrument’s statements. Dunlap and colleagues then developed the New Ecological Paradigm Scale to respond to criticisms of the original. This is sometimes referred to as the revised NEP scale to differentiate it from the New Environmental Paradigm scale.

The revised NEP has fifteen statements, called items. (See table 1 on the next page.) Eight of the items, if agreed to by a respondent, are meant to reflect endorsement of the new paradigm, while agreement with the other seven items represents endorsement of the DSP. Using a Likert scale, a commonly used rating scale, respondents are asked to indicate their strength of agreement with each statement (strongly agree, agree, unsure, disagree, strongly disagree).

The authors asserted that the revised NEP had several strengths, making it a reliable and valid tool for measuring a population’s environmental world view. In particular, they said the new scale was internally consistent

TABLE 1. Revised NEP Statements

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1. We are approaching the limit of the number of people the Earth can support.
 2. Humans have the right to modify the natural environment to suit their needs.
 3. When humans interfere with nature it often produces disastrous consequences.
 4. Human ingenuity will insure that we do not make the Earth unlivable.
 5. Humans are seriously abusing the environment.
 6. The Earth has plenty of natural resources if we just learn how to develop them.
 7. Plants and animals have as much right as humans to exist.
 8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.
 9. Despite our special abilities, humans are still subject to the laws of nature.
 10. The so-called "ecological crisis" facing humankind has been greatly exaggerated.
 11. The Earth is like a spaceship with very limited room and resources.
 12. Humans were meant to rule over the rest of nature.
 13. The balance of nature is very delicate and easily upset.
 14. Humans will eventually learn enough about how nature works to be able to control it.
 15. If things continue on their present course, we will soon experience a major ecological catastrophe.
-

Source: Dunlap et al. (2000).

The seven even numbered items, if agreed to by a respondent, are meant to represent statements endorsed by the dominant social paradigm (DSP). The eight odd items, if agreed to by a respondent, are meant to reflect endorsement of the new environmental paradigm (NEP).

(people who responded to some items in one pattern tended to respond to other items in a consistent manner) and that it represented a measure of a single scale (that it had unidimensionality).

Use and Critiques

The revised NEP is used widely in the United States and in many other nations. It is used in cross-sectional assessments of the relationship of environmental world views to attitudes on public policy, to recreation participation patterns, and to pro-environmental behaviors. It is also used in before-and-after studies of the effects of some intervention or activity, such as the impact of educational programs on environmental world views. It is probably the most widely used measure of environmental values or attitudes, worldwide.

The revised NEP scale has its critics. There are three broad categories of criticism. First is the assertion that the revised NEP scale is missing certain elements of a pro-ecological world view and thus is incomplete. Specifically, it is said that the scale leaves out expressions of a biocentric or ecocentric world view that comes from late twentieth-century environmental ethics literature.

A second line of criticism concerns the validity of the scale. This comes typically from researchers who have tried to document links between NEP scale results and

pro-environmental behavior. When links between NEP scale results and behavior are weak, some researchers suggest that the scale fails to measure a world view accurately. Tests of the NEP scale as a predictor of environmental behavior are part of extensive social-psychological research to explain the root causes of environmental behavior.

Finally, there is considerable debate about the dimensionality of the revised NEP scale. Dunlap and colleagues argued that the NEP in both of its iterations measures a single dimension, endorsement of a world view that could be measured simply by adding up the responses. Numerous studies have used a statistical technique called principal components analysis to test this. These studies had different results, suggesting that the NEP captured not one dimension but often three or more dimensions. This variability in results leads some to question both the NEP's validity (does it measure the phenomena it is claiming to measure?) and its reliability (does it measure those phenomena in the same way across different populations or across time?).

Future of the NEP Scale

Given its extensive use in many settings, the New Ecological Paradigm scale will continue to be used widely. Because no other instrument has been so

extensively accepted as a measure of environmental world views, it will continue to be valuable, if for no other reason than it gives researchers comparisons to make across study types, population types, and time. The growing body of research will create additional opportunities to test the NEP for its reliability and validity.

More importantly, it is clear that underlying values will have significant effects on debates around sustainability. Advocates for the usefulness of the revised NEP scale believe that progress toward sustainability would be reflected in shifts in NEP scale scores in the general population from endorsement of the dominant social paradigm toward endorsement of a New Ecological Paradigm. As such, the revised NEP scale would be a fundamental metric of progress toward sustainability. In the same manner, public information or sustainability education campaigns would be deemed successful if they caused a similar shift. For the NEP scale to serve this function effectively, however, there will need to be greater acceptance of its validity and reliability as a metric of sustainability values.

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See also Challenges to Measuring Sustainability; Citizen Science; Community and Stakeholder Input; Environmental Justice Indicators; Focus Groups; Participatory Action Research; Quantitative vs. Qualitative Studies; Sustainability Science; Transdisciplinary Research; Weak vs. Strong Sustainability Debate

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