# Data on environmental attitudes and behaviours – with Mark Elliot

### Transcript - Assessing the structure of UK environmental concern and its association with pro-environmental behaviour

Full resource (and video): <https://www.ncrm.ac.uk/resources/online/all/?id=20834>

Mark Elliot: Hi, I'm Mark Elliot, and I'm going to be talking to you about assessing the structure of UK environmental concern and its association with pro-environmental behaviour. And this is part of work that we've done at the University of Manchester around this topic and there's been numerous different threads, so, that this is one particular study I'm going to be focusing on.

So, first of all, I'm going to outline a bit of theory, and then our particular approach, go through some results and then some thoughts arising from those.

So, the theory that was prevailing certainly when we started our study, and it's still very much the dominant theory, is the value of beliefs and norms theory, originated from Stern et al. And in the theory essentially there are three components to the attitudes, but all could be present in any individual person, biospheric, altruistic and egotistical. And this creates an ecological worldview which leads through into particular beliefs and norms and then into behaviours. That's the prevailing theory.

Now, empirical work largely appears to have validated the theory, however, we do have some concerns about this. It seems to be an open question whether theory and instrument are conflated in these studies. So, if you use your theory to design a survey, then it's no great surprise when your theoretical structure emerges from your survey, which is essentially what has happened with a lot of the studies that have been conducted in order to test this theory, construct a survey, then run the survey, then analyse the results, and you've got a circularity there, a self-proving hypothesis.

So, we decided to take an inductive approach to this. So, can these familiar environmental concern constructs emerge from attitude and behaviour survey without the use of strict EC scales? And if so, are there recognisable VBN components evident in British samples given that the theory itself was driven from US studies? And what is the behavioural context? Sorry, what is the behaviour on ontological distinction between attitudes and reported behaviours in this context? This is a really important element of attitude theory is thinking about whether behaviour is simply the conative component of an attitude, or whether it's a separate thing which is directly caused by the attitude. How do environmental attitudes relate to behaviour in such data?

So, we were using Defra’s Survey of Public and Attitudes and Behaviours Towards the Environment for this particular survey. It's available on the UK Data Service. The 2009 wave was used with a sample of nearly 3,000 British participants. There have been quite a few waves of that survey.

There were 10 Likert scale questions selected from the survey instrument and these were ones that were taken to represent environmental concern in some way and we weren't focused in this aspect on behaviour.

So, we used exploratory and confirmatory factor analysis. So, the exploratory factor analysis used maximum likelihood factoring with parallel analysis used for determining factor retention. Because we're doing something inductive here, and our point here is to try and see what emerges from the data, specifically that, these sort of inductive approaches are plausible. We then test what we found using a CFA. Now it's not a test in the strong sense of a test of a theory. We're really testing whether what emerges from the exploratory process is the best fit to the data.

And in fact, yes, three factors do emerge. They do, however, not directly map onto VBN. So, is this the first interesting part. We have this ecocentric concern which does directly map. And then there's this humancentric concern which broadly might be regarded as altruistic. Something like that, but it's not exactly the same, it's not an exact mapping. And then we have this thing called denial, and this captures an idea of response designed just to deny that climate change is happening, which obviously doesn't come through as a separate factor inside the VBN type theory.

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We then looked at an ordinal regression analysis on a number of behavioural variables as our responses and these are factors as the predictors. And what we found is that the denial factor came through really strongly as the highest predictor for environmental behaviours and the humancentric did not seem to matter at all and the ecocentric one was slightly significant for one of these behavioural factors. So, essentially, we're finding this denial factor is the biggest predictor of environment in the direction that you would predict.

VBN type factors do broadly emerge from the data, but the three factors that emerge throw up something else. Now these are pretty much independent factors. There are some correlations between them, as you probably expect. So, for going back into this structure here, we can find people who expressed concern on these two concerned dimensions, but also expressed denial. And some of these things create potential contradictions. So, you might, for example, say yes to there's a major disaster, environmental disaster looming. But then you might also say that it's too far in the future. And there's something about denial responses which seems to grasp onto almost this kind of sense that your explanation for what's happening or anything that do not require you to act. And that might be what's being drawn out here. And we subsequently did a cluster study and we found a paradoxical cluster of people who believed apparently contradictory things that were much more interested in apparently in choosing act things which required no action, either because it was too late or because it was too far away to worry about.

So, here's the two papers. So, the first one on the dimensional study using PCA and confirmatory factor analysis in the Journal of Environmental Psychology. And then one on latent class analysis where we find that unusual class structure with this paradoxical class. And then a continuation of that using Understanding Society. There are lots of different surveys you can now use for environmental attitudes becoming increasingly important obviously. And that was looking at change over time, thinking about how environmental attitudes over those clusters that we're picking out are consistent. And we find they are. The structure that we've discovered seems to be held consistently over time, but people move between the different clusters and there's been a general move over the ten year period between 2012, 2020, a nine year period, where people are becoming more concerned again, perhaps unsurprisingly.

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