

How can villages become eco-villages?

Dr Peter Forster

Ms Marybeth

Pereira



Human activity & climate change

- Human activity probably contributes (Crowley, 2000; Levitus *et al.*, 2001; Stott *et al.*, 2000)
- We can reduce our impact by:
 - Recycling
 - Using public transportation
 - Purchasing local and environmentally friendly products
 - Conserving energy
 - Conserving water, and so on (Stern and Gardner, 1981a, 1981b; Stern, 2000)



Why don't people do more?

- Lack of knowledge about the causes, consequences and current state of climate change (Sundblad, Biel and Gärling, 2009)
- The costs to individuals override or outweigh the benefits to others (Burke, 2010)
- The belief that the actions of individuals have little or no effect on climate change (Burke, 2010)
- The belief that technological advances will provide a solution in the future (Burke, 2010)
- The sunk costs in established habits and prior investments (Burke, 2010)
- A lack of trust in the government and other information sources (Burke, 2010)

Theories of connectedness

- Wilson (1984, 1993: 31–41) described **biophilia** as an emotional and innate connection people have with all living things. It assumes that most people will have a preference for natural environments.
- Stern *et al.* (1999) developed the **value-belief-norm (VBN)** model. In this model, our values can activate beliefs about the environment and, in turn, these beliefs cause us to behave in certain ways towards the environment.

This study

1. Connectedness to nature will have a significant positive relationship with pro-environmental behaviours when social desirability is controlled for.
2. Egoistic, altruistic, and biospheric values will have a significant positive relationship with pro-environmental behaviours when controlling for social desirability.

This study

- Participants
- Measures:
 - Connectedness to Nature Scale
 - Environmental Concerns Scale
 - Environmental Behaviour Scale
 - Crowne-Marlow Social Desirability Scale



This study

Results:

- Connectedness to nature was **positively** correlated with pro-environmental behaviours, $r(74) = .36, p < .01$
- Egoistic values were **not** related to pro-environmental behaviours $r(73) = .10, p = .39$.
- Altruistic values were **positively** related to pro-environmental behaviours, $r(74) = .33, p < .01$, as were biospheric values, $r(74) = .37, p < .01$

This study

Results:

- The positive relationship found between connectedness to nature and pro-environmental behaviour confirms our first hypothesis.
- The second hypothesis was partially supported as altruistic and biospheric values, but not egoistic values, were positively related to pro-environmental behaviours.

How to increase pro-environmental behaviour...

- Education is not enough - We need to change beliefs
- Repetition helps
- And some environmental changes can change behaviour too



Example – planting trees leads to:

- Fewer accidents
- Increased value of property
- Improved health and well-being
- Reductions in crime



References

- Arnocky, S., M. Stroink and T. DeCicco (2007), 'Self-construal predicts environmental concern, cooperation, and conservation', *Journal of Environmental Psychology*, 27 (4), 255–264.
- Bird, W. (2007), *Natural thinking: investigating the links between the natural environment, biodiversity and mental health*, Sandy: Royal Society for the Protection of Birds.
- Burke, S. (2010), 'Understanding the psychological barriers to climate change action', inPsych, 32 (6), 40–41.
- Clark, C. F., M. J. Kotchen and M. R. Moore (2003), 'Internal and external influences on pro-environmental behavior: Participation in a green electricity program', *Journal of Environmental Psychology*, 23 (3), 237–46.
- Crowley, T. J. (2000), 'Causes of climate change over the past 1000 years', *Science*, 289 (5477), 270–277.
- Levitus, S., J. I. Antonov, J. Wang, T. L. Delworth, K. W. Dixon and A. J. Broccoli (2001), 'Anthropogenic warming of Earth's climate system', *Science*, 292 (5515), 267–270.
- Lorenzoni, I., S. Nicholson-Cole and L. Whitmarsh (2007), 'Barriers perceived to engaging with climate change among the UK public and their policy implications', *Global Environmental Change*, 17 (3-4), 445–459.
- Mayer, F. S. and C. M. Frantz (2004), 'The connectedness to nature scale: A measure of individuals' feeling in community with nature', *Journal of Environmental Psychology*, 24 (4), 503–15.
- Schultz, P. W. (2001), 'The structure of environmental concern: Concern for self, other people, and the biosphere', *Journal of Environmental Psychology*, 21 (4), 327–339.
- Schultz, P. W. (2002), 'Inclusion with nature: The psychology of human-nature relations', in Schmuck, P. and P. W. Schultz (eds), *Psychology of sustainable development*, Massachusetts: Kluwer Academic Publishers, pp. 61–78.
- Schultz, P. W., V. V. Gouveia, L. D. Cameron, G. Tankha, P. Schmuck and M. Franek (2005), 'Values and their relationship to environmental concern and conservation behavior', *Journal of Cross-Cultural Psychology*, 36 (4), 457–475.
- Schultz, P. W., C. Shriver, J. J. Tabanico and A. M. Khazian (2004), 'Implicit connections with nature', *Journal of Environmental Psychology*, 24 (1), 31–42.
- Stern, P. C. (2000), 'Toward a coherent theory of environmentally significant behavior', *Journal of Social Issues*, 56 (3), 407–424.
- Stern, P. C. and G. T. Gardner (1981a), 'Psychological research and energy policy', *American Psychologist*, 36, 329–42.
- Stern, P. C., and T. Dietz (1994), 'The value basis of environmental concern', *Journal of Social Issues*, 50 (3), 65–84.
- Stern, P. C. and G. T. Gardner (1981b), 'The place of behavior change in managing environmental problems', *Zeitschrift für Umweltpolitik*, 2, 213–239.
- Stern, P. C., T. Dietz, T. Abel, G. A. Guagnano and L. Kalof (1999), 'A value-belief-norm theory of support for social movements: The case of environmentalism', *Human Ecology Review*, 6 (2), 81–97.
- Stoll-Kleemann, S., T. O'Riordan and C. C. Jaeger (2001), 'The psychology of denial concerning climate mitigation measures: Evidence from Swiss focus groups', *Global Environmental Change*, 11 (2), 107–117.
- Stott, P. A., S. F. B. Tett, G. S. Jones, M. R. Allen, J. F. B. Mitchell and G. J. Jenkins (2000), 'External control of 20th century temperature by natural and anthropogenic forcings', *Science*, 290 (5499), 2133–2137.
- Sundblad, E.-L., A. Biel and T. Gärling (2009), 'Knowledge and confidence in knowledge about climate change among experts, journalists, politicians, and laypersons', *Environment and Behavior*, 41 (2), 281–302.
- Wilson, E. O. (1984), *Biophilia: The human bond with other species*, Boston, MA: Harvard University Press.
- Wilson, E. O. (1993), 'Biophilia and the conservation ethic', in Kellert, S. R. and E. O. Wilson (eds), *The biophilia hypothesis*, Washington: Island Press, pp. 31–41.