Challenging assumptions in the psychology of climate change

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David Uzzell, Professor of Environmental Psychology, conducts research and is a consultant in the area of sustainable development for the European Union, the UK Government, local and regional governments, as well as the Economic and Social Research Council. This article describes some of his recent research and provides a context for his Keynote address at the forthcoming APS Conference which will raise critical questions for psychology and psychologists working on climate change and sustainable development.

Climate change is no longer a contested issue. What is contested is what we do about it. Governments now recognise that climate change and its consequences need to be addressed by changing peoples' behaviour and everyday practices; technological fixes alone will not be enough. When one appreciates the extent of the causes and consequences of climate change it is clear that psychology should be playing a key role.

Climate change is already having a direct effect on people and places, for example, though a greater frequency and intensity of storms, flooding, tidal surges, and high temperatures. The heat-wave in 2003 was responsible for over 35,000 excess deaths in Europe. Climate change will have a secondary impact on food supplies either by destroying farmland or reducing crop yields, and changing the distribution of plant and animal diseases, as well as food-borne diseases, allergic disorders, and some vector and rodent-borne diseases (Menne and Bertollini, 2005).These in turn will require the introduction of expensive pesticides and herbicides which many communities will not be able to afford, and which will further damage the environment. Moreover, they will also lock farmers into a dependency relationship with international agrochemical companies, as many already are with patented and 'terminator' seeds (i.e., seeds modified to grow plants which themselves produce infertile seeds). Food security, national and transnational migration and inter-group conflict will be potential third level responses, along with other economic, social, political and health impacts. And then there will be psychological consequences, e.g., stress, anxiety, and PTSD.

The impact of climate change has been exacerbated by population growth and urbanisation, the development of megacities, and environmental degradation caused by human activities. In 2007, for the first time in history, more people were resident in urban than rural areas. The concentration of people into smaller areas and building in unsuitable places (e.g., flood plains) makes communities much more vulnerable to natural hazards. In December 1999, flash floods in Venezuela killed more than 30,000 people, many in modern high-rise buildings, as a result of unplanned development. The catastrophic impact of climate change may extend way beyond the regions of the immediate disasters. The Asian tsunami, for example, which caused over 300,000 deaths, also accounted for the greatest loss of life ever of Swedish citizens from a natural disaster, killing nearly 550 and injuring some 1,500 Swedish holidaymakers.

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The psychological landscape of climate change concern

What is the psychological landscape on which we are working and seeking to encourage more sustainable lifestyles that recognise the global as well as local impact of environmentally damaging behaviours? In a series of international collaborative studies undertaken in Australia, Ireland, Slovakia and the UK, members of environmental groups, environmental science students, and children were asked about the seriousness of, and their sense of responsibility for, various environmental problems in terms of their impact at the local, national, continental and global level (Uzzell, 2000).

The first question posed was, "How serious do you consider various environmental problems at various areal scales", to which respondents checked their answer on a 5-point scale (5 = serious). Without exception in each study, people considered environmental problems at the global level to be more serious than those at lower spatial levels.
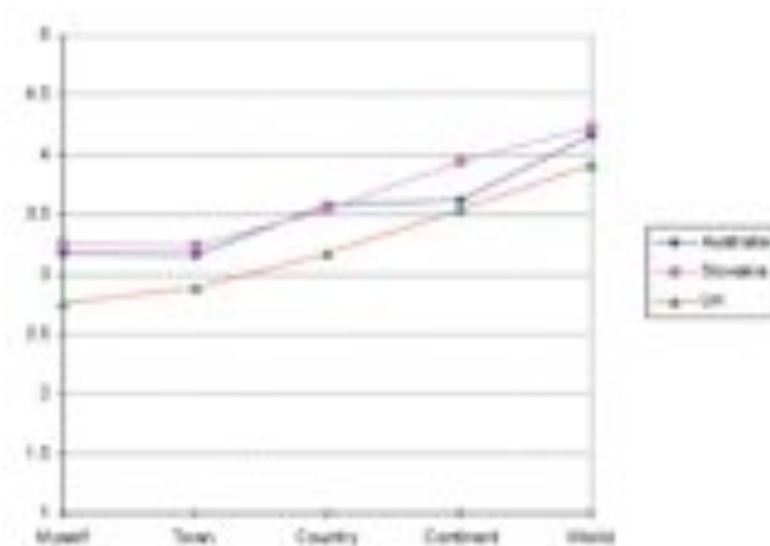

Figure 1. Perceived seriousness of environmental problems at varying areal levels (5-point scale, where 5=serious)

We also sought to identify the areal threshold of attributed personal and institutional responsibility for the environment. We found that feelings of responsibility for the environment were greatest at the neighbourhood level and decreased as the areal level became more remote. Although people felt that they are responsible for the environment at the local level, this is precisely the level at which they perceived minimal problems. The areal level which they perceived has the most serious environmental problems is the areal level about which they felt least personally responsible and powerless to influence or act. So we are faced with the paradox that government and civil society organisations (i.e., NGOs) are trying to raise the public's level of environmental concern and change their behaviours at precisely the level which the public see as unproblematic. This study was

recently repeated amongst British and Swedish students (Uzzell & Räthzel, 2008). In addition to the same distal effect, we found a temporal effect too, i.e., students thought that environmental problems will be significantly worse in 20 years time at the local and country levels, although no worse at the global level.

As soon as someone says "climate change", people are already beginning to turn off. They place it in a box marked "someone else's problem" or "a problem I will deal with in the future". But as we have seen, there is no community in the world that is not at risk from climate change. Likewise, there should not be a single profession in the world for which it is not a relevant part of their work in terms of the contribution they can make to mitigation or adaptation responses.

Most psychological research on climate change has concentrated on mitigation, e.g., the public's level of environmental concern; personal and lifestyle characteristics of, and the barriers to, action; internal and external influences on specific types of environmental behaviours; the role of values, beliefs and habits on environmental behaviour; the effectiveness of different interventions (e.g., tailored information, goal setting, feedback, modelling) on specific types of environmentally responsible behaviours (e.g., energy consumption, recycling, travel mode). Much of this work, following the lead of government policy, has been individualistic and reductionist focusing on strategies for behaviour and lifestyle change. The government response to this research has been a concentration on top-down strategies relying on coercive behaviour change through incentives and penalties, education and attitude change programs. Recently, in response to psychological research, more 'social' subtle strategies have been employed drawing on social marketing techniques, social norms and identity approaches. There has also been a growing amount of work which has sought to set environmental damaging behaviours in a societal/cultural context, examining the relationship between affluence, materialistic values, wellbeing, community engagement and ecologically damaging behaviours (Kahneman et al, 2006; Kasser, 2002).

In contrast to the overtly articulated behaviour changes approaches, there has been a grassroots community-led counter movement called 'transition culture' which has recognised that change can only come about when people themselves want change. It has sought to answer the question, "What does happen to this town when we can't afford oil anymore and how can we build resilience and wean ourselves off our dependency on oil (Hopkins, 2008)?". This work has been much influenced by DiClemente's (2003) Stages of Change model which was originally devised in relation to addiction treatment.

There has been significantly less work on the psychological consequences and effects of climate change and adaptation responses. A recent report for the UK Government refers to mental health issues in relation to climate change (Kovats, 2008). Interestingly, it has started to be recognised by counselling psychologists even as a source of eating disorders and relationship difficulties (Rust, 2008). Morrissey and Reser (2007) have reviewed the mental health implications of natural disasters which are a consequence of climate change in rural Australia and the importance of preparedness and community health, wellbeing and preventive mental health initiatives.

Challenging assumptions

Notwithstanding the research undertaken on attitudes and behaviours with respect to reducing carbon emissions and encouraging more sustainable lifestyles, assumptions are

often made by those in central and local government as well as civil society as to who are most interested in and supportive of sustainable development actions, and who are appropriate targets for, and what methods are most effective in, changing attitudes and behaviours. The remainder of this article describes some of the key findings from research which I have found important to communicate to policy makers in order to challenge the assumptions they make in devising policies and programs.

1. Everyone experiences similar barriers to acting sustainably

There are many publics; they all have different reasons for adopting or resisting pro-environmental behaviours. If people seem to be acting in environmentally damaging ways it may be a product of their attitudes and behaviours, but it may also be a function of the conditions in which those attitudes and behaviours are formed. Different strategies will be required for different groups depending upon the different barriers they erect to sustainable behaviour. In a study examining the barriers to changing from disposable to modern reusable cloth nappies, it became clear that different groups of parents had different constraints and needs - convenience, self belief, experience, initial institutional (e.g., hospital) support, incentives, information for spouses, stigma and cost (Uzzell & Leach, 2003). One way of thinking about these barriers, the kind of strategies that are required to overcome them, and the prioritising of them as target groups is to define these groups in terms of 'would, could, can't, don't and won't'.

	Would	Could
Won't	X	Secondary target
Can't	Primary target	X
Don't	Primary target	Secondary target

The 'Woulds' are people who are likely to have a positive attitude towards, say, using cloth nappies but their willingness to make this choice is reduced by some practical and probably external barrier.

The 'Would but can't' parents may have financial constraints on choosing cloth nappies as the initial outlay can be high.

The 'Would but don't' recognise the importance of the environment, but do nothing - perhaps they don't know what to do, are confused, do not have the confidence, or feel intimidated by others.

A baby uses on average 5,000 disposable nappies in their lifetime

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The 'Coulds' have fewer practical barriers - it is attitudinal and lifestyle considerations which need to be overcome; for them, it is more a question of choice. As this group requires more time and effort to overcome their resistance, they might be identified as secondary targets.

The 'Could but won't' parents have the financial means but prefer to spend their income in a different way, or they don't think recycling communicates the right image, e.g., a van coming to collect nappies.

'Could but don't' parents have the ability, knowledge and means, but they just
can't be bothered or they oppose it as a matter of principle, e.g., "Why should I
be told what to do?" or "I pay my city tax - they should collect my waste".

Depending on the category in which these groups fall, we need research to find out how to overcome these barriers and then tailor appropriate intervention strategies. In terms of the 'effort to effect' ratio, it may not be worthwhile targeting particular groups; they will be so resistant that the amount of resources required far outweighs the potential benefits. Furthermore, they may come on board later when they see their neighbours have adopted the new practices.

2. The young are most supportive of pro-environmental actions

It is commonly assumed that young people are the most supportive of pro-environmental actions. In 2000, we undertook a major study of attitudes towards waste minimisation in Surrey which involved interviewing over 9,000 people and sending questionnaires to 16,000 Surrey residents (Lyons, Uzzell & Storey, 2001). It was found that young people (age 18 - 35 years) in the sample:

   * were the most strongly opposed to changing their behaviour as they considered being forced to recycle was an infringement of individual freedom. They resented being told what to do and admitted that if they felt under pressure to recycle they were less likely to do it.
   * objected to penalties for not recycling and joked about the "recycling police and a police state", and about having bins with alarms fitted that went off when you threw out a recyclable item.
   * considered that recycling and pro-environmental behaviour change should not be a priority because they perceived few immediate, serious and tangible benefits or costs to the
      individuals concerned.
   * considered that the environmental effects of waste generation were too distant to motivate change, and small lifestyle changes were seen to have "zero effect" on what is regarded as a global problem.

Understandings and beliefs about environmental change have to be seen in the context of individuals' wider set of understandings and beliefs about society, as well as whether they see themselves as active and willing participants in change or simply victims.

3. Recycling has a positive image

How do people see those who do recycle? For the focus group members in the same study, most of the role models associated with recycling were negative. The prototypical recycler identified by the young people was an "old man in his fifties with a beard or a woman in a tie-dyed t-shirt and dungarees". The young parents had various stereotypes of people who recycle: an ecowarrior image, Swedes or other Scandinavians, outdoors types, people who buy IKEA furniture or someone who is perfect. The middle-aged group described a recycler as "someone boring". Four years later we found evidence of a slight shift in the image of a recycler (Nigbur, Uzzell, Lyons & Muckle, 2005). A recycler was seen as a likeable, energetic person; someone who has strong environmental beliefs but is also slightly idealistic; an older, female, locally employed person with a family, car and a garden. However, the old stereotypes still remain - they would be a "dogooder", left wing, green-voting, hippy type. It may be that as the urgency and acceptability of recycling takes hold then such stereotypes will disappear, but when trying to make people adopt 'recycler identities', it is important to be conscious of the self-presentational implications.

4. Children will change their parents' attitudes and behaviours

It is has become a cliché to say "we should concentrate our efforts on children as they will change their parents' attitudes and behaviours". This 'pester factor' suggests that as a consequence of learning about environmental issues at school, children go home and nag their parents to save energy and conserve water, and the hapless parents eventually relent.

Funded by the EU, a cross-national research study was undertaken to test whether children can have the kind of catalytic effect on their parents and the wider community as is often claimed (Uzzell, 1999). The research concluded that the role of children in encouraging sustainable behaviours in the family occurs only rarely, typically in more middle-class and better educated families. For it to happen the environment has to be regarded as an appropriate topic for discussion within the home, the child's concerns about the environment should be valued by the parent resulting in 'expert' status for the child, while the parent should be willing to adopt the role of pupil. In the majority of homes we found low levels of concern about environmental problems, with parents having little knowledge about environmental problems and in some cases negative attitudes towards education, low levels of motivation and poor self esteem in respect of their educational role. It cannot be assumed that simply giving children environmental change information and relying on a process of osmosis will lead to enhanced concern and action.

Conclusions

Psychologists are in a position to challenge the folk wisdom, wishful thinking and assumptions which often inform government and civil society policies concerning human behaviour and environmental change, and offer theoretically-informed and evidence-based climate change mitigation and adaptation policies and actions. Climate change offers research and practice challenges for all psychologists. In order to be effective however, psychology too has to change. It has to accept that it does not operate in a vacuum and

cannot save the world by itself. One of the critical lessons learnt in environmental psychology has been the need to position behaviour within its larger social, environmental, economic and political context. Therefore, not only do different areas of psychology need to work collaboratively together, but psychologists need to work in inter/transdisciplinary modes and thereby broaden and deepen their concepts.

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