Abstract

We are beginning to take responsibility for the welfare of the earth and no longer see ourselves as passive spectators of uncontrollable climatic forces. Psychology can encourage this by positively changing attitudes and behaviour for the benefit of our environment by using psychological techniques. The greatest benefits can come from social and educational psychology in the home, school and workplace.

To change habits, we need to know, for example, why people say out loud that they want to stop negative climate change and yet behave recklessly in climate terms in their everyday lives. There is a conflict of interests to be addressed.

Children can be educated to see beyond their domestic world, to draw on their learning so as to use it for the community’s mutual benefit. Consideration of difficult concepts such as time, space, biodiversity, the troposphere and technology calls for an intelligent and educated leadership which can read and think scientifically to distinguish genuine evidence from false trails and conspiracy theories.

Every day the media report catastrophic global climate changes. Scientific and political debates rage on global warming, pollution and the loss of natural resources. Concepts such as sustainability and biodiversity have become part of everyday conversation. In fact, aiming to be ‘green’ is becoming a social norm in many parts of the world. But this does not include everyone. In Britain, for example, those most likely to make ecological changes to their lifestyles are aged over 65, live in rural areas or are of a higher social class (Survey for the Ministry of Environment Food and Rural Affairs, Nov 2007 Tinyurl.com/ypzenk). There is a need to involve more younger people and those in cities.

The overwhelming evidence from scientific investigation of current climate change shows that we can no longer see ourselves as passive spectators of uncontrollable forces, but that we are starting slowly to take responsibility for the welfare of the earth. God features less, whether as a source of blame or as hope of rescue. Nor can we plead ignorance because our scientific instruments tell us what it is happening and why.

The psychological challenge is considerable. For everyone, the difficult concepts of time and space have to be changed so that we start thinking longer-term in terms of hundreds of years, not tens, because greenhouse gases have a long life. So not only are we suffering from the actions of the past few generations, the benefits of our own efforts will not be seen for perhaps another 100 years. We must also consider the whole planet, including the troposphere – the atmosphere that supports all life – not just our city or country.
Psychologically, attempting to change people’s beliefs and perceptions it is necessary to understand the old familiar ways, as basic as seeing and hearing. For example, you might be very familiar with a field nearby because you have grown up close to its stillness and beauty with only the sound of the birds, until one day workmen arrive and churn it up, bringing great anxiety until they leave it filled with a hundred enormous, white, turning windmills cutting the air and filling the sky with a terrible noise. What has been a familiar pleasure, knowing and loving that land, has been drastically destroyed and for the rest of your life. Nobody asked you: a faceless bureaucracy did it with no regard to your personal outlooks. Your head knows that the windmills are there to grab energy from the wind, but your heart is broken and angry.

The strange thing is that so many people intellectually accept pressing climate problems, yet seem to put that knowledge in a sealed compartment when they fly frequently or drive alone in a gas guzzling car. In fact, it takes a certain intelligence and maturity to consider the cumulative secondary effects of small individual actions. Even though you may feel bad every time you put your foot on the accelerator, your guilt has not actually managed to get you to change. You could, though, run your car on 20 percent biodiesel and tell everyone you have 20 percent less guilt – or buy a fuel-efficient car.

Becoming aware of the evidence of how the climate is changing because of despoliation of the earth is typically a four stage process.

**Stages of acceptance**

1. Denial of the problem
2. Apathy
3. Choosing to be part of the solution
4. Taking action – the most difficult because it means making an effort.

In this paper, I look at some psychological research evidence and draw practical conclusions from it as to how it could change minds and behaviour for the sake of the environment.

**Psychology for change**

Psychology has much to offer in the concern with climate. Environmental psychology has moved fast from a focus on the built environment at the end of the 20th century to that of the natural environment (Nickerson, 2002). Most particularly, it is attempting to understand the way we live socially, which affects who we believe we are and what we are entitled to. The work-place brings in other human factors involved in the development and use of technology for energy-efficiency and recycling. Add to that consumerism, risk assessment and cost-benefit analysis, and those who have a sense of concern for the environment may face overwhelming dilemmas.

**Here are some pertinent questions for psychology**

- How can we hold two or more inconsistent ideas in our heads at the same time?
- Why do people say one thing and do another?
- Why do people behave inconsistently from one situation to another?
- How do people translate their feelings and beliefs into actions?
The problem for psychology is that because it is concerned with human beings it is not an exact science. Psychological problems are rarely clear-cut with only one right solution: sometimes several seem equally possible. Solutions may even demand an intuitive approach with a mixture of information and feelings. Choices in everyday dilemmas, like who you marry or where you choose to live, will change your life and happiness and are often heavily based largely on intuition. In fact, just identifying the cause of an everyday problem, let alone the solution, is difficult because it is part of the way you live. Everyday dilemmas are also very persistent; one decision sometimes only seems to pave the way for a new one. It is simply not possible to close the textbook and go away. Furthermore, solving a life problem is one thing, but convincing other people of the rightness of your solution is another.

Cognitive Dissonance

The idea of holding clashing ideas in one’s head at the same time was first presented by Leon Festinger in his theory, Cognitive Dissonance (Festinger, 1951). The dissonance part, he said, “is experienced as uncomfortable tension”, in spite of which we all act against our beliefs at times. Perhaps as you put a cigarette to your lips, you squash the idea that smoking is bad for you. Or maybe, as you reach for one more cream cake, you push aside thought of your high cholesterol level. Everyone understands the meaning of Cognitive Dissonance because we all do it (Cooper, 2007).

When you make a decision, the tension of Cognitive Dissonance disappears and a reward of emotional satisfaction goes to support your decision. In fact, some people may deliberately create that tension to get the emotional reward that follows. Cognitive Dissonance - playing with tension – may, in fact, be at the roots of curiosity and the need for variety. A big example might be – How can I be a creative artist and a scientist at the same time? But others hate the business of choosing because it means painful conflict, and they do their best to avoid it, closing their minds to questioning and doubt. It is the simplest and most basic way of dealing with what we do not want to see – just deny it. They do not see, for example, that current climate changes may be increasing to dangerous levels because of human behaviour. No, they argue, climate has always changed across the millennia. They deny responsibility, claiming that there is nothing we can do about it. Anna Freud called such attitudes “defence mechanisms” (Freud, 1937). She wrote that defensive emotional strategies are created when people are confronted by an anxiety-provoking situation and unconsciously avoid dealing with it.

A defence may be simply mañana, putting things off or refusing to face change by arguing that it has always been done that way. Then along come environmentalists who show the need for change and so challenging the status quo. The defence ones could be, for example, the owners of water companies which have many big leaks in the system, but who fear the financial cost of plugging them. It is so much easier to deny what is happening and its effect. Psychological understanding aims to recognise the reasons for these barriers to change and points to ways in which they may be overcome.

These deep barriers to action are addition to those of inertia. On the whole, humans prefer do nothing. One way out of this is making consent the default-option. So, for example, instead of asking people to volunteer their organs for donation on death, some countries and American states are making organ donation the default option. You have to say specifically
that you do not want your organs used for others when you die so that inertia is being used for the good of others.

**Psychological capital – intuition and culture**

Feelings guide our actions, perhaps more than we would like to think, because none of us can be experts in every decision we make (Hogarth, 2001). We make daily intuitive choices of what feels right in the situation, though we cannot explain why. How, for example, did you decide what to wear today? Which garment, and why? Why did you automatically greet one person but hesitate before speaking to another? The trouble is that intuition is unreliable: the fact that some decisions are right in one situation does not guarantee they will be right in another.

Cultural influences on individuals have deep historical origins along with mythology and religion. These effects can be seen, for example, in social-class divisions of labour or the roles prescribed for each gender. Culture filters through generations when parents teach their children how to behave, but it also spreads horizontally, as when some cultures affect others, notably the world-wide American influence. Cultural influences also come from creative endeavour, for example the psychological ideas of Sigmund Freud or Pablo Picasso's new concepts of art. With all these currents and cross-currents, the culture inherited by a particular generation is never the same as the one it passes on.

Our intuitions reflect our own idiosyncratic psychological capital, our personal collections which along with our personalities work within our culture. The Russian, Lev Vigotsky, was the first to recognise this effect in his 'socio-historical' approach (Vigotsky, 1978). He pointed out that while children are learning to speak, they are also taking in 'ready made' parcels of culture which affect all their communicating and thinking. The system works, he wrote, because adults in the culture have learned it and share the cultural assumptions. To change people’s attitudes for the sake of the environment, psychology has to recognise and deal with this deep and powerful cultural influence – both within each individual and in the society.

**SMOKING - AN EXAMPLE OF SUCCESSFUL CHANGES OF MIND AND BEHAVIOUR**

The rise of anti-smoking feeling and action provides a beautiful example of how attitudes and behaviour can be changed after highly successful efforts to approach people’s psychological capital. About 30 years ago, such a change in behaviour seemed an impossible goal. The tobacco industry had infinitely more resources than the tiny sums the health education campaigners could raise. Smoking advertisements were everywhere - in the media and on the streets - while their advertising jingles rattled on in the mind. Today, it is the same for ecology. For example, the estimated budget for Greenpeace is about $20 million a year, while that for advertisers of consumables worldwide is probably around $400 billion.

But in addition to lack of means, the health educator’s major focus for many years was simply to tell people how bad smoking was for them. Like the notices in the doctor’s waiting room, it had almost no effect. The old assumptions about the nature of smoking, that it was normal, sophisticated – and a human right - seemed unchallengeable. When news of the ill-effects of tobacco began to be made public in the ‘60s, there was a famous
quote by a tobacco executive. He said that “doubt is our product”, meaning that they were no longer only selling tobacco, but also uncertainty, promoting the thought that maybe tobacco was not really poisonous, in spite of the scientific evidence. In the same way today, some still refer to climate change as though it were merely a possibility.

Although study after study published by scientists showed the benefits of cutting out smoking, it was not until there was real leadership in the form of government edicts, firstly banning cigarette advertising followed by a general prohibition of smoking, that minds and fashion changed. Now, as countries rush to ban smoking in enclosed public places (and some in the open air) the positive effects can be seen in quality of life. The increasing enactment of a smoking ban is possible because of the steep rise in public understanding of the effects of smoking. And smoking continues to go down (Office of National Statistics, 2008). In 2008 only 22 per cent of Britons aged over 16 still smokes, down from 24 per cent the year before and from 45 per cent in 1974. Strangely, more girls are now smoking (10%) than boys (7%), for which there is no explanation. Looking back over thirty years there has been almost a reversal of belief in the social value of smoking. What lessons from that successful campaign can be applied to the much less personal effects of world climate control?

**Four lessons from the anti-smoking campaign**

1. **Challenge**
   It is possible to challenge deep assumptions, the psychological capital, of vast populations of all ages and from many cultures. Challenge to beliefs can open the possibility of change. As with smoking, concern about climate change raises three challenging questions which need resolving before many would be prepared to change their assumptions and habits.
   
   i. What is true and what is not true?
   ii. What are the immediate benefits to the individual as well as to the wider world?
   iii. What can each individual do about it?

   Evidence must be offered in a language which is easily understood and persuasive, and from a trustworthy source. Sometimes the information does not always clarify the issues and may lack conviction. Television and films are easily accessible, as is the internet, notably as the world-wide Facebook, Myspace or personal blogs.

2. **Decision making**
   The most powerful mind-changing influence in decision-making is social – consensus. A consensus can only be built on the base of what people already believe. Psychologically, people are more likely to follow the lead of others like themselves, or of others they would like to be like - the current celebrity ‘Hello’ culture is an underused force for good. Massive global arguments can feel outside the individual’s control and thus be counterproductive, so it would be sensible to teach responsibility for the environment on the basis that climate change is already germinating in the public mind.

   In Sweden, for example, psychologists asked 621 participants aged from 18 to 75 whether 44 statements about climate change were true or false (Sundblad, Biel & Garling, 2007). The big global facts on climate changes, the causes and the consequences for the weather, sea and glaciers, produced little notable response. But the more personal health
statements, such as, ‘It is probable that mortality by lung oedema and heart problems during heat waves in Sweden will increase in the next 50 years’, produced the strongest reaction.

Influential experimental work by Kurt Lewin in America showed how people's outlooks and productivity could be changed by understanding them in their life-space (Lewin, 1948). He pointed out that individuals make decisions within a group, especially when they share a common goal. He used three groups in a famous experiment. The group that was democratically led, where everyone felt they had a part, motivated its members far more than either the autocratic group where members were told what to do, or the laissez faire group without any leadership. To change behaviour, he concluded, the approach should be persuasive and involving rather than either didactic or no leadership.

Schools, apartment blocks, factories, and other institutions can act as a group. It is these social networks which make ‘green’ behaviour seem like the normal thing. But not everyone is altruistic: propaganda without action may simply produce eco-fatigue. People want to see the benefits to themselves. When taxes increased on cigarettes consumption fell. Other financial incentives, such as tax breaks or rebates for solar panels appear to initiate action. In Germany, for example, there is financial help for solar power, whereas there is no such help in the UK. Solar panels on houses in Germany are growing in number, whereas there are few in the UK. But in London, the use of electric cars is increasing rapidly possibly because they are not subject to the congestion charge to enter the city centre and they have free parking.

We cannot see or feel the effects on global health from what each of us does, so we have to take it on trust that if we recycle paper it is going to make a positive difference to the world. Yet to keep change moving, individuals need clear positive feedback, at very least a pat on the back. Psychologically, we know that when rewards are immediate they are more valued and effective than when they are a long time away. It is often easier to reward the results of the behaviour, rather than the behaviour itself (Winter & Koger, 2003). But whether of money or time, the perceived cost to the individual must not be higher than they are prepared to give.

3. Education

Education is an environment set within a greater environment. Children who fail to learn about their role as part of a greater world perspective, to understand and think about life outside their own lives are intellectually restricted (Freeman, due 2008). There are two ways to help children become more aware of the world. The first is from the more usual direction, 'top-down', when teachers tell pupils what to think and how to behave. But this kind of didactic telling ignores any consensus and so may be rejected or swiftly forgotten by the pupil. The alternative is the slower but more effective 'bottom up' approach where learning and attitude change is a more democratic process involving teachers and pupils.

To have the greatest effect education should be of both kinds. A 'top-down' approach could start with coordinating and expanding on what pupils already know and the ideas they have about it. It is the original meaning of education, bringing out the best from young minds, rather than attempting to fill empty vessels. Alternatively, in the 'bottom-up' approach, teachers could organise workshops in schools to start an involving awareness campaign about the energy use of local facilities. Promoting awareness enables every child to expand
knowledge in a meaningful way; knowledge which can be used flexibly and creatively in many situations.

Knowledge must be gained in a meaningful way to the child in his or her world. The best education encourages children to develop curiosity, problem-solving attitudes and a true love of learning to last them for life. Children will act most positively and creatively when they have enough self-confidence and courage to experiment with what they know.

Writing from Australia, Volk (2008) says that gifted students, more than others, show interest in the future of the world, in that they want to take action for global interdependence. She sees the gifted as “potential future leaders”. I certainly found that in my own research the gifted they were indeed more interested in world events and had much stronger opinions than the average ability youngster, but their outlooks also correlated very highly with those of their parents and their socio-economic status (Freeman, 2001). Briefly, the more intellectual the home, the more the children in it would be involved in thought and consideration of non-domestic happenings. For sure, the gifted have a greater potential to deal with issues of change and morality, though this does not mean that they will take up these matters (Freeman, Morality 08). I argue that to have their greatest positive effect, global concerns are a matter for all young people.

Developing a concern for the environment in school pupils is essentially concerned with intercultural understanding and collaboration with due regard for cultural viewpoints. It involves, of course, the use of natural resources and what each individual can do for our joint benefit, but it also includes concern for peace, international trade, poverty and the availability of clean water and medicine. At least in much of the developed world, such matters are more frequently becoming part of school curriculum from the start.

Positive international communication about the environment is affected by the following.

Language (although English is the primary technological language)
Cultural approaches. For example, if one culture sees interference with what they see as natural as interference with God’s will they will refuse to seek change. This could be, for example, a refusal to limit the number of children a family has to support.
Geography, which includes not only the terrains within a country but also distance. Being directly involved is better than secondary information.
Technology, for good in raising awareness of climate change, or ill in coordinating terrorist activities. The areas of the world which have access to information technology are already well ahead in communication than the others.

4. Government
It is not only ordinary people who need convincing, but more importantly - politicians. The final stage in the smoking ban came through legislation, though it could not function as smoothly as it does without the considerable underpinning of social consensus that smoking in public places was wrong.

Legislation has brought immense changes for the benefit of the environment, though this could be speeded further with penalties for polluters as in the taxes on cigarettes. Forward-thinking legislators have taken brave steps, such as banning smoking in Irish pubs, and now banning free flimsy plastic bags in China. Even greater effects could come from obliging car
manufacturers to modify engines and use more environmentally friendly fuel. Legislation also implies monitoring and evaluating its possible effects. But it can only function well if there is a basis of consensus, whether conscious or unconscious. Legislation is perhaps the ultimate psychological action.
References


