
LANGUAGE, IMAGES AND BOUNDARIES

A Schumacher Institute Challenge Paper

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The Challenge: For our society to adopt truly sustainable lifestyles will require informed and effective decisions and actions by people across the whole social spectrum. There is a growing realisation that in order to generate the necessary societal transformation, individuals, groups and organisations must be motivated to undertake what can often be difficult and fundamental changes to their behaviour.¹ As both understanding and motivation can be strongly influenced by language, the focus of this paper is on the challenge of achieving effective communication between those with specialist knowledge and expertise and the wider public.

1. Lost in translation?

Climate change and resource depletion represent two clear and scientifically well-documented threats to the well-being of our society, but as yet we have arguably made little real progress in tackling either issue. Evidence from UK public opinion surveys suggests that:

Climate change doubts and Britain's recent economic difficulties have combined to downgrade people's environmental concerns. Appetite for protecting the environment declines further where it involves lifestyle change and personal cost. If government wants to do more to promote green behaviour it needs to tackle scepticism about the causes of climate change and convince people that it represents a real threat.²

There also appears to be poor public understanding of what 'sustainable' means and how more sustainable lifestyles might be adopted.³

Scientists and researchers from many disciplines have played a role in developing our understanding of the complex processes involved in climate change and resource depletion, and how these issues relate to our everyday activities. Experts that have a deep understanding of a particular field of study or practice, whether as individuals or in groups, often require very precise and specialised linguistic frameworks to enable them to communicate the finer points of their respective subjects and to work co-operatively. However, there can be significant challenges involved in translating from these specialist languages when attempting to communicate complex scientific information to non-experts. Whenever public participation is required in order for action to be undertaken, non-experts need to be able to develop sufficient understanding of the subject in question to be able to effectively participate. This communication challenge has been recognised within the research community. For example, early on in the European Union FP6 Science and Society research programme it was recommended that specific requirements for dissemination of research results and finding be developed for the subsequent FP7 programme.⁴ Progress is also being made in communications between different disciplines and expert groups, under the guise of inter-disciplinary working.⁵

2. Language, Images and Understanding

Often language mediates understanding by generating mental pictures or images of the issue being

1 Crompton, T. (2008) *Weathercocks and Signposts: The Environment Movement at a Crossroads*. London: WWF

2 Quotation from Alison Park, lead editor, National Centre for Social Research; <http://repealtheact.org.uk/climate-change-act/latest-uk-public-opinion-polls-on-global-warming-green-energy-policy>

3 UNEP Global Survey for Sustainable Lifestyles, May 2011: <http://uncsd.iisd.org/news/unep-releases-global-survey-for-sustainable-lifestyles/>

4 Papon, Pierre, et al; Mid-term Assessment: Science and Society Activities, 2002-2006; European Commission; 2007; EUR22945.

5 Parker, J. (2010) Competencies for interdisciplinarity in higher education. *Int. Journal of Sustainability in Higher Education*, Vol. 11 Iss: 4, pp.325 - 338

described, a process supported by the use of analogies, metaphors and similes. A key challenge for the expert community around sustainability is to communicate complex technical concepts in a manner that encourages the changes in behaviour required if the worst impacts of climate change and resource depletion are to be mitigated and/or adapted to.

One area where complex scientific concepts are routinely and effectively communicated across the expert, non-expert divide is in the medical profession. An example of this is in diabetes programmes, where children as young as three are routinely taught to self-inject insulin. Given the perception that sticking a needle in oneself is a painful thing to do, convincing people of any age that injecting insulin is a good thing can be a challenge - not just for the patient but also for family and friends, medical practitioners and the pharmaceutical industry who develop treatments. Years of research involving experts drawn from the numerous relevant medical specialisms have enabled the development of effective approaches to educating and supporting patients in dealing with the disease. The result is that often difficult behavioural or lifestyle changes can be successfully made that ensure that the patient can lead a normal a life as possible. So how have the medical and related professions been so successful in getting their message across? To demonstrate one aspect of their success let us consider the following text describing Type 1 Diabetes:

“Type 1 DM [Diabetes mellitus] is associated with autoimmune destruction of the beta-cells of the endocrine pancreas... This results in aberrant expression of class II MHC antigen by pancreatic beta-cells. T lymphocytes recognize antigen-presenting cells and are activated, producing cytokines such as interleukin 2.”⁶

The writing is highly technical in nature and clearly aimed at the expert audience, but most non-expert readers find it virtually useless for developing their basic understanding of the condition. Compare this with the approach taken in a booklet published by BD Consumer Healthcare⁷ explaining type 1 Diabetes and its treatment to young children. The booklet uses a combination of simple language and pictures to explain what diabetes is and focuses on the ‘impacts’ of the disease rather than the technical causes. Stomach enzymes are depicted as little comic people who work as miners, mining the sugar from food using picks and shovels. The miners then transport the sugar to the blood in the wagons. The next picture shows a miner tipping the sugar from a wagon into a red coloured stream (the blood stream) whilst shouting to the pancreas that he is doing so. Another group of little people are rushing out of the pancreas with fishing nets. These are the insulin cells and they are depicted fishing the white sugar from the stream and loading it into little furnaces; cells that burn the energy to work. These pictures illustrate the system working properly. The next two pictures show a miner, having just tipped a load of sugar into the stream, scratching his head in puzzlement as no insulin people have emerged from the pancreas. The stream is full of white sugar flecks and the fires in the furnaces have gone out. This very powerfully demonstrates what happens when the pancreas stops producing insulin as in type 1 diabetes. The important points to note are that very few long words are used and some of the detail is omitted for the sake of brevity and clarity; the message is limited to the essentials, making it engaging and quickly understood.

3. Boundaries and behaviours

Figure 1 below highlights how many people might think about their life, at least in the developed world.⁸ It includes factors that many would recognise within the common concept of a ‘work life balance’; our home life, with family, friends and hobbies, the journey to work and work itself with

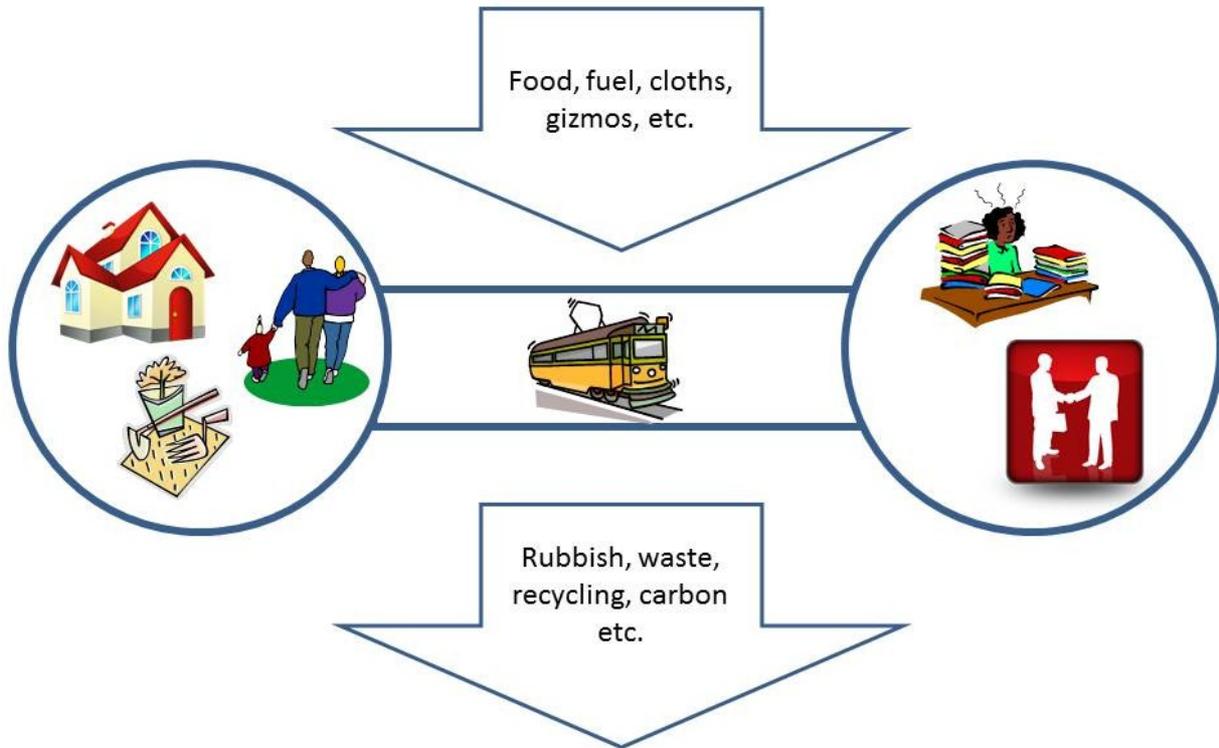
6 Scobie, I. N. (2002) *An Atlas of Diabetes Mellitus* (2nd Ed.) London: Parthenon Publishing.

7 BD Consumer Healthcare (2001) *Getting Started with Diabetes*.

8 The focus on the developed world is a deliberate reflection of the need for the developed world to recognise the leadership that it must show, given that it has historically contributed the most to climate change and resource depletion.

more friends and colleagues.

Figure 1: Life's boundaries, inputs and outputs.



Life boundaries are often a matter of individual preferences, particularly when considering how we view our lives - for example, where we see the limits of personal responsibility.⁹ Where we each choose to draw our boundaries is important as it defines our plans, decisions and actions. Often the challenge for an expert advisor is to introduce some change to these boundaries; in the medical example given above, it is to encourage a patient to accept a serious medical condition, take responsibility for, and effectively manage that condition. For those trying to encourage societal level change with regards to sustainability the challenges are not entirely dissimilar: a complex, pressing issue requiring urgent attention. Fig.1 uses block arrows to highlight the inputs and outputs that make our lifestyle possible. Those things that we take for granted, food, fuel, clothes and those 'must-have' gizmos; and when we have finished with them all, there is the rubbish, waste and recyclable material to be dealt with. These inputs and outputs represent our impact on the big issues facing society such as climate change, resources depletion, *etc.* They are in effect the 'bridge' between our everyday responsibilities and activities and the ecological system that supports our current civilisation. We rarely if ever give these inputs and outputs a second thought; how they got there and where they go afterwards. If society is to effectively engage with the need for a sustainable future, not only must these inputs and outputs enter our thoughts, but we must also act upon the new understanding. So how can we extend the boundaries of life to include these broader issues in a manner that encourages and supports change?

If we look to the medical example for insights it is clear that the first step is to generate a basic understanding of the situation as it pertains to the individual, group or organisation. It is clearly not possible to engage with every human being on an individual basis, but the production of medical educational information resources are not produced on that basis either; rather they are developed for a specific age group, or segment of the target audience. A second insight is that it

⁹ Adam, B. (2012) Responsibility to Future Generations. Bristol: SISS. Available for download from <http://www.schumacherinstitute.org.uk/challenge%20papers>

often requires expertise from a range of disciplines, e.g. medical professionals, pharmaceutical companies, artists (in the production of the material), to generate effective communication resources. It is an interdisciplinary or team game. If the communication materials are well designed and targeted, health professionals are supported in their vital communication activities with their patients and both are able to develop a shared level of understanding that facilitates effective learning, and thus, crucially, empowers the patients to better manage their condition for themselves.

4. Language and motivation

Language can also have powerful emotional impacts. There is evidence that motivation is strongly influenced by the language used to communicate with the target audience. For example, language appealing to an individual's understanding of self appears more likely to generate changes in behaviour than external factors.¹⁰ This suggests that it is important to include the ideas of human well-being when encouraging fundamental behaviour change, as is the case in the medical example highlighted above - although this is of course no guarantee of success. Furthermore, different language can help to frame the issues, re-drawing personal boundaries in a manner that enables participants to more effectively engage with them in ways that make a real difference.¹¹ For example, one driver of rain forest clearance is the use of tropical hard woods to create durable garden furniture for Western markets. Highlighting the general issue of rain forest clearance and demanding that the 'West' do something about it is all well and good, but what specific actions do such campaigns encourage? Highlighting the specific connection between hardwood garden furniture and the clearance empowers ordinary people to take direct action through the purchasing choices they make in the gardening store. They can still have garden furniture, but if they choose sustainably sourced materials they will have made a small but valuable contribution to the changing of societal behaviours.

5. Extending life's boundaries to include sustainability

Encouraging the wider public to adopt more environmentally sustainable lifestyles will require a similar level of engagement, understanding and participation between experts and non-experts in the sustainability field as has been demonstrated in other fields of scientific endeavour. The best solutions will require shared understanding and learning between expert and non-expert, but for this to be effective there needs to be a common level of understanding that is sufficiently accurate to enable effective action to be taken. This may mean that the expert will have to adopt language that from their perspective may be seen as over-simplifying. However, if it enables the non-expert to ask informed questions, suggest alternative and desirable solutions and to begin to make informed personnel or organisational decisions then compromising linguistic purity might well be a price worth paying. Adopting a sustainable lifestyle need not be about sacrifice, hardship or dictate – it can equally as well be about well-being, security and empowerment. How the message is framed determines the imagery that is engendered in the audience. Get it wrong and a sustainable lifestyle appears awful; get it right and it could well become the next most sought after 'thing'.

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¹⁰ See for example Nerlich, B., Koteyko, N. & Brown, B. (2009) Theory and language of climate change communication. *WIREs Climate Change* 1:1 (Jan/Feb 2010).

¹¹ Ison, R., Blackmore, C. & Morris, D. (2006) *Starting off Systemically in Environmental Decision Making*. Milton Keynes: The Open University. ISBN N978 07492 02651.