

Sustainable Development through Voluntary Behaviour Change

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Abstract

Since the late 1990s, there have been examples of travel behaviour change programs using what are termed 'voluntary behaviour change methods' – primarily in Europe and Australia.

At the same time, in the attempt to reduce greenhouse gas emissions in water, energy and waste, there has been a considerable amount of research and experience in household voluntary behaviour change methods in these non-transport areas.

This paper takes an in-depth look at the concept of voluntary behaviour change. The first section of the paper draws lessons from these other fields.

The paper then examines the change tools that can be offered – based on experience in other fields, as well as in the transport literature – before it devotes attention to unravelling the differences between a social marketing approach and a community development approach to voluntary behaviour change. It concludes that, while both can be effective, there are some risks in using a social marketing approach when the marketing aspect is overemphasised.

Based on a recent program in Melbourne, Australia, it presents an example where the sociological principles of behaviour change are combined to develop a new approach to travel behaviour change offering people multiple tools, based on resolving their key frustrations. This differs from past approaches that have usually focussed first on the policy-makers' key goals – to reduce emissions or congestion.

Finally the paper describes a model that builds on current experience and allows local communities to gain skills to implement change themselves.

Keywords

Voluntary behaviour change, reinforcement, engagement, diffusion, trusted others, community development, social marketing, public/private partnerships.

1. INTRODUCTION

Since the late 1990s, there have been examples of travel behaviour change programs using what are termed 'voluntary behaviour change methods' – primarily in Europe and Australia.

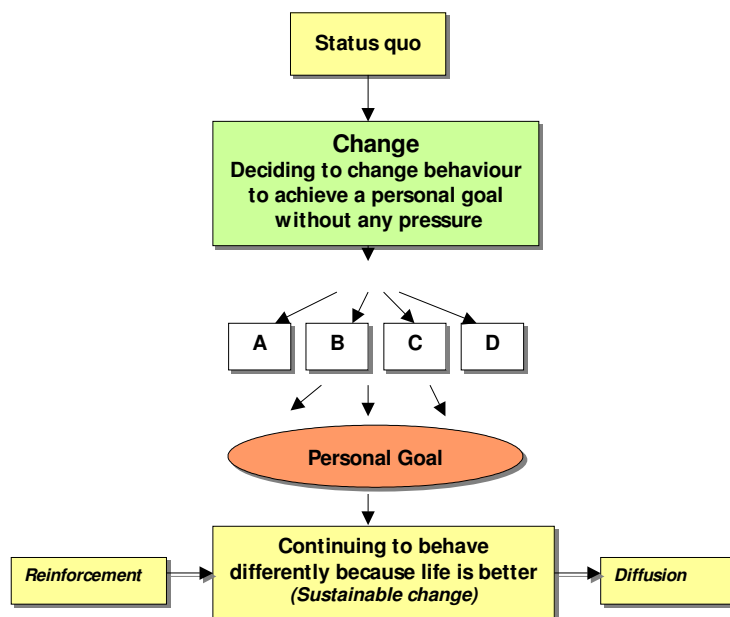
At the same time, in the attempt to reduce greenhouse gas emissions in water, energy and waste, there has been a considerable amount of research and experience in household voluntary behaviour change methods in these non-transport areas.

This paper takes an in-depth look at the concept of voluntary behaviour change. The first section of the paper draws lessons from these other fields¹. We spend a short time highlighting the differences between a social marketing approach and a community development approach to voluntary behaviour. Finally we present an example where the sociological principles of behaviour change are combined to develop a new approach to travel behaviour change offering people multiple tools, based on resolving their key frustrations with travel. This differs from past approaches that have usually focussed first on the policy-makers' key goals – to reduce emissions or congestion.

1.1 WHAT IS VOLUNTARY BEHAVIOUR CHANGE?

Voluntary behaviour change is defined as change that occurs when individuals make choices for personal reward without a top-down mechanism, regulation of any sort, or a feeling of external compulsion. Figure 1 shows the processes that are involved in making a sustainable voluntary behaviour change.

Figure 1: The Conditions Surrounding Voluntary Behaviour Change



¹ The first and last sections of this paper draw extensively on a paper by the author presented at the 2003 International Association of Travel Behaviour Research Conference (Ampt, 2003)

In the first instance, an individual decides to make a change so that he or she will improve their personal life in some way. This can occur for a variety of reasons, although if it is true voluntary behaviour change, none of them is an external pressure from another person or medium. The reasons can include:

- Arriving at a point where the negative effects of an existing activity reach a certain level of intolerance
- Realising for the first time that 'it is possible for me, as an individual, to change'
- Hearing of someone else who has changed – particularly someone who is trusted, respected or perceived to have similar values
- Experiencing a 'change moment' (e.g. new job, new home, new partner, choosing to change goals or beliefs)
- Feeling that a change is appropriate because it is fashionable

An example in travel behaviour could occur when someone who has always thought they were 'spending all day chauffeuring children' met someone at a book club² meeting who felt similarly, lived nearby and agreed to take the children to school on alternate weeks.

Then, when a decision to change is made, actual behaviour change is more likely if there are a number of options for change – for example, in travel it could be the option for someone else to do the activity in the course of an existing journey, a mode change option, or even a non-transport option.

Since voluntary behaviour changes in travel always achieve a personal goal in terms of improvement of lifestyle, or behaviour that is more congruent with values, they are likely to be sustainable.

Behaviour change is then subject to reinforcement activities. These can occur in the form of further benefits that accrue to an individual in terms of their personal values, or in the form of an individual recognising the presence of supportive infrastructure changes.

Finally, because the behaviour change has had a positive benefit to the individual it is likely that they will tell others of the benefits (diffusion). Since we are more likely to practise diffusion in the company of trusted others, the message is more likely to lead to further change.

2. UNDERSTANDING MOTIVATIONS FOR CHANGE

Understanding individuals is a key to successful travel behaviour change programs. There are at least three reasons for this:

To motivate people, we need to understand them.

To know how to motivate people, we need to understand something about them and how they think about and make decisions about their activities and about how they think about and use their cars.

To target behaviour change that people will actually do, we need to understand them.

Behaviour change programs that are developed to reduce car use reduce no emissions until people and households adopt them as planned. Some behaviour changes will appeal to people and others will not. It is an uphill task to motivate people to adopt changes for reasons that are not important to them. It is clearly

² The association of people who have similar interests or beliefs, such as might occur at a book club is often termed 'trusted others', see <http://media.socialchange.net.au/strategy/>

easier to choose behaviours to select if we understand people and households better.

To develop behaviour changes that will appeal to people, we need to understand them.

As has just been discussed, not all behaviour changes may appeal to all people. And, unless people adopt those changes, the new concepts or tools will not reduce emissions. Despite this, tools are sometimes developed paying little attention to whether householders will adopt them (Lutzenhiser 1992). We will be in a better position to develop travel behaviour change tools that appeal if we try to understand individuals.

2.1 PEOPLE ARE DIFFERENT

Our intuition about how to motivate people to bring about travel behaviour change can be very wrong. For instance, behaviour change programs often assume that people will change if they receive information about why and how to reduce car use. This assumption is incorrect. This section cites literature explaining when information can motivate, and what type of information motivates.

Referring to behaviour change in the area of energy, Costanzo et al., 1986 note:

To date, most efforts to “market” conservation have taken the form of large-scale information campaigns. These programs have relied on two vague theories of conservation behavior: the attitude model and the rational-economic model. The attitude model assumes that conservation behavior will follow automatically from favorable attitudes toward conservation. The rational-economic model assumes that people will perform conservation behaviors that are economically advantageous...Although both “theories” are intuitively reasonable; we believe that they underestimate the complexity of human behavior.

Another temptation is to assume that people will make a change to travel behaviour if they receive a financial incentive. It has been shown that money is often a poor motivator and it might even discourage behaviour change in the long run. Stern et al., 1987 give an example from the experience of the US National Research Council’s Committee on the Behavioral and Social Aspects of Energy Consumption showing that when homeowners were offered individualised energy information at low cost or even for nothing, the response was extremely low because other social and cultural factors were more important (Section 2.1.1).

Shipworth (2000), in an extensive review of motivations to energy actions (including travel reduction), concluded that there are vital lessons here:

- Simply feeding information to home energy users usually has little impact on their actions. The actions of a home energy user are also influenced by their personalities, attitudes, previous actions, their income, the attitudes and actions of their friends and associates, and by the community and culture(s) they belong to.
- Successful energy action programs cannot be built on assumptions about what motivates actions. We don’t make assumptions about which technical features will save energy in homes. We use recommendations based on research by technical energy specialists. Likewise, before choosing how to motivate action, we need recommendations based on research by social scientists.

2.1.1 The role of money in motivation

As noted earlier, it is common to assume that a financial incentive (or disincentive) will change behaviour. There are several reasons why this is not always the case.

People do not know how much travel costs

The transport fraternity often takes for granted that people do not include the operating costs of a vehicle when they make a cost-based decision to drive a car. This is supported by research in other energy areas. Lutzenhiser (1993) found that people overestimated the energy used by visible appliances such as lights but underestimated the energy used by invisible appliances such as hot water services. One reason for this behaviour is the difficulty of measuring the 'invisible' costs.

The role of cultural and social values in 'economic' decisions

During the 1970s in the US, energy prices nearly quadrupled. However, the US Department of Energy estimates that, between 1972 and 1980, average energy use per household decreased only 1.5% per annum (Frieden and Baker, 1983). Furthermore, most of the savings were not due to improvements in the energy efficiency of homes or purchases of energy efficient appliances but to householders changing their lifestyles (Frieden and Baker, 1983).

At the time, draught proofing (weatherising) was an extremely 'economically rational' home energy action. In addition, it was easy to do without professional help, the 'technology' was proven and the result improved comfort by reducing drafts. Despite all this, the vast majority of homeowners did not draught proof their homes (Wilk & Wilhite, 1983). Experienced ethnographers in a Californian study found that householders' actions were influenced by the way they feel about their home and the way they feel about doing different jobs in the home (Wilk and Wilhite, 1983) They knew that it made economic 'sense' to draught proof their homes – but most people did not do it.

The important lesson is that cultural and social values are deeply held and challenging these in voluntary behaviour change programs is unlikely to be useful. The alternative approach means that program managers need to take these cultural and social values into account when developing a program and actually use them as a basis for brining about change. While some people will find money an important aspect in their lives (and hence a motivator), others will not. This can also vary by stage in the life cycle.

The likely impact of a financial incentive strategy

Financial incentive strategies are ineffective if many or most of the people claiming the incentive would have changed behaviour even if the incentive were not available. People who claim the financial incentive but would have taken the energy action anyway are 'free-riders'. Low-income households are less likely to be 'free riders' (Shipworth, 2000). Financial incentive strategies can also be ineffective if they result in people feeling they should only change behaviour if they are sufficiently financially remunerated. Such wholesale remuneration is unlikely to be financially viable.

Financial incentive strategies are effective if they help transform the market for an energy-efficient product such as. If they increase the size of the market for the product, costs of production (per unit) may decrease, lowering the cost of the product, which may increase the market for the product. (Colombier & Menanteau 1997 p. 428).

It can be difficult to establish the likely impact of a financial incentive strategy. Surveys give an inaccurate picture of the likely impact of a financial incentive (Stern et al., 1987) because of the hypothetical nature of the question and the tendency for people to report socially desirable behaviours (Foddy, 1993).

Finally, there is considerable research to suggest that financial incentives of the same level produce radically different behaviours – even to the extent of both increasing and decreasing behaviours they are intended to encourage (Stern, 1993).

2.1.2 The Role of Information in Motivation

It is often argued that giving information is a vital component of bringing about voluntary behaviour change. While it is certainly important, it does not always motivate people to change.

Information strategies develop out of the assumption that people will undertake the necessary actions once they know what they should do, how they should do it and why they should do it (de Young, 1993). This is often not the case.

In the US, information programs were at the forefront of efforts following the first energy crisis of the 1970s. These programs aimed to educate consumers using energy audits and printed materials. Alone, education resulted in negligible energy savings. Even in combination with loan schemes, it was still ineffective (Nadel & Geller 1996). By 1980 already over 90 separate studies had been conducted testing the impact of information programs on consumers home energy use (McDougall et al. 1981). Research also indicates that pamphlets, videos and other information services result in very little savings - possibly in the region of 0-2% (e.g. Collins et al. 1985 in Nadel & Geller 1996, McDougall et al. 1981, Stern et al. 1987).

In the travel behaviour field, Tertoolen et al. (1998) made a similar finding. When people were simply given information on their travel, and had no understanding of a way to change, they changed their attitudes ('travelling by car is not that bad after all') rather than their behaviour (see Section 2.1.3).

Information about costs is not very likely to motivate householder action when the costs are low or not perceived as important by some people. A small South Australian information program provides anecdotal evidence that people may actually use more energy once they are informed about the cost of running certain appliances, such as air conditioners (reported in Shipworth, 2000). That said, the threat of loss motivates people much more than the promise of gain (e.g. Tversky and Kahneman, 1991)

This means that it is the effect of an information program that is important - not merely its existence.

2.1.3 The Role of Attitudes in Motivation

There is considerable evidence that attitudes are not necessarily associated with behaviour. As Eagly and Kulesa (1997) note:

One of the paradoxes of the psychology of environmentalism is that citizens generally hold pro-preservation attitudes but routinely engage in environmentally unfriendly actions, such as driving to work instead of using public transportation.

Programs that are predicated on the attitude model would assume that attitudes cause behaviour. Unfortunately, scientific research has demonstrated that there is rarely a strong, direct, or consistent relationship between attitudes subsequent action:

...people who cite conservation as the single most important strategy for improving our energy future are no more likely than others to engage in energy-conserving behaviors.

(Costanzo et al. 1986)

A person who has an attitude that suggests that it would be consistent for him or her to use the car less cannot bring about behaviour change if that person does not know how to change. This is one of the key roles of a voluntary behaviour change program in travel.

2.1.4 The Role of Values in Motivation

Different people have different values that are important in their lives at a certain time. For example, for some people money is an important motivator because they have little, or get pleasure out of saving costs. For others, any change that would

give them more time to spend on discretionary activities may be an even more important value. Still others value health, environment, independence, family and so on.

Understanding that different people in different households have different values – the priorities of which change throughout their lives - is an important aspect of understanding what motivates people in a voluntary behaviour change program.

The critical need to understand people's motivations means that travel behaviour programs need the involvement of professionals who understand people, as well as professionals who understand travel behaviour. The one without the other will not succeed.

2.2 BRINGING ABOUT VOLUNTARY BEHAVIOUR CHANGE

Having examined the complexity of the way in which motivations for changing behaviour vary, this section establishes the way in which voluntary behavioural change can actually be brought about.

There are several important principles that ensure that travel behaviour change will occur in a sustainable way for individuals participating in the program. They can be summarised as follows:

- Change is easiest if it suits our lifestyle and fits into our core values
- Change is more likely if there is a wide range of choices
- We are more likely to change if we gain personal benefits
- We are more likely to change if it is perceived to be easy for us
- We are more likely to change if it is easy to see (measure) that we have changed – even a small amount
- We are more likely to sustain change if we get positive recognition for our effort and achievements (from others)
- We are more likely to change if other people are also making changes
- Particularly in the household context: even if we can't change much ourselves, the household can still change and we can support them, and hence contribute in a different way

2.2.1 What supports behavioural change?

Recent experience (e.g. Shipworth, 2000, Steer Davies Gleave, 2003) suggests that there are several supportive approaches that are very important in bringing about and sustaining behavioural change.

A household-based approach

There are several reasons why a household-based approach to reach individuals has been shown to be a key ingredient for supporting a behavioural change program. Here we give travel behaviour examples.

- Household interdependencies mean that reducing car kilometres by 'activity sharing' is often made easier (Could you please pay the phone bill at the post office while you're shopping next door?).
- Household members can often provide easy car-sharing schemes (Can you drop me at Mary's place on your way to work?).
- Household members can provide peer support and peer pressure for change ('Hey Dad, are you too lazy to walk to the shop?', 'Shall we share a ride to the party?').

- Households are made up of people with different interests and, as such, provide diffusion catalysts into different households (via organisations such as schools, workplaces, interest groups and so on).
- The household is the generator of a large amount of transport greenhouse gases each year (3-4 tonnes in Australia). Social research has clearly shown that technology alone (e.g. minimum performance standards for vehicles) will not reduce emissions sufficiently because it is more a factor of use than design which influences greenhouse gas emissions (Shipworth, 2000).

Focus on the household rather than on the individual is valid, since private car travel is generated largely by the collective activity of the household rather than the individual.

Giving personal knowledge of change

A second approach that has been supportive in bringing about behaviour change is giving people personal knowledge of change.

It is important that the voluntary behaviour change methodology gives people not only the option/s to change, but also an understanding that there is a wide range of choices for change – not all obviously transport changes. In addition to mode change, people need to feel they have a whole palette of choices, both short and long-term. These could include:

- carrying out activities near to home or an existing activity
- allocating an activity to different household or non-household member who can do it as part of an existing trip
- encouraging local shops to stock products which we currently have to travel longer distances to obtain (good for the local economy, good for you, good for the environment)
- choosing a local activity when there is a choice (gym, school, park) and
- arranging events where local participation (stalls, caterers, etc.) is encouraged.

Giving a range of quick results and long-term options

Another supportive approach is to ensure that a travel behaviour change program is delivered in a way that allows people to choose options that have quick results. Most of us understand the benefit of relatively quick gratification of behavioural change – whether it is dieting or saving money by travelling more efficiently!

There are two ways to assist in achieving this. One is that, in giving people a palette of choices (see above), they are likely to choose something that they know will be quick for them (this varies from one person to another, depending on where they live, what they do, what choices they have, and so on). The other is to assist them to measure the behavioural change themselves so that, as in dieting, they can rejoice in the loss of grams (time saved) rather than kilograms (greenhouse gases reduced).

On the other hand, giving people long-term options for change, is also important because some people either cannot do not want to change in the short term – and it is important to give ‘late adopters’ a chance to do something.

Hence, in a travel behaviour change program, opportunities such as choosing a new activity close to an existing activity (gym near work, or a school near home) are important ideas for some people.

The presence of robust diffusion mechanisms

Strategies that require households to diffuse the message both between households and ultimately across communities are likely to be more sustainable than those that do not.

The most effective way of diffusing a message is by word of mouth (Stern et al., 1987). When a person tells someone about what they are doing, they are not only reinforcing their own behaviour in the process, but also giving a level of commitment.

Understanding current communication patterns and enhancing communication effectiveness in a community has been found to be a vital ingredient for attaining success in diffusion of the ideas and actions in relation to reduction of the negative impacts of the car (e.g. Ampt 1999)

Incorporating community strategies has the potential for building in a community development approach that a chance for diffusion to take place over time and is hence, an essential component of diffusion.

2.2.2 What are the tools for change?

A recent report for the Australian Greenhouse Office (EnergyConsult 2002) gives a convenient list of tools needed for behavioural change approaches involving reduction of greenhouse gases – including changes to travel behaviour. Our experience in the most recent TravelSMART communities project described in Section 3 suggests that there are 2 ‘foundation tools’ and many others.

The foundation tools are:

Using word of mouth – the strongest tool for diffusion and reinforcement. In all our voluntary behaviour change projects to date it has been shown that messages delivered any other way are reinforcing, but much less efficient.

Telling stories – There are two reasons for the fundamental tool of story telling 1) stories are reinforcing and diffusing, and 2) when there are stories to tell, it means that change has happened.

The others include:

Involving key people early – not necessarily traditional leaders, but ‘trusted others’ in the community.

Giving vivid personalised communication – making any messages dramatically clear and memorable, using images as close as possible to the person with whom we are communicating.

Giving recognition and reinforcement - once people have achieved one thing and received praise, recognition and reinforcement means that they are more likely to try another change.

Presenting choices and options for action so that people understand there is not just one way to do things – there is a way for everyone.

Giving feedback so that people know what they have achieved personally, as well as their household and their community.

Creating visibility in the community – through articles in the paper or inviters, or something else that is part of their community as a constant reminder

Using prompts or cues that remind people to carry out an action that they might otherwise forget to do.

Using peer support groups – they can be particularly useful for ongoing problem solving, reinforcement, and celebrating of success.

Visiting an organisation or group - for some people this shows commitment by the program managers, and it gives the opportunity to understand the situation more fully and quickly.

Using media stories – can be a good tool for creating receptivity and credibility to a program, for reminders, to stimulate face-to-face conversations, and to show participation and results.

Using opinion leaders and credible sources – they, or people drawn from the community and trained to do so, can help people overcome barriers to action and give ongoing support beyond their household.

Using the concept of personal rather than financial incentives – e.g. using public transport rewards me with the time to read more.

Obtaining a commitment – ranges from telling the project team that you will do something, to telling your household, to signing a pledge- and means that people are more likely to act on that commitment.

3. COMMUNITY DEVELOPMENT AND SOCIAL MARKETING APPROACHES

Having described the principles underlying a voluntary behaviour change approach, it is important to understand that there are two main bodies of social theory underpin the ways in which voluntary behaviour change is currently being encouraged – either using a community development or a social marketing approach.

3.1 SOCIAL MARKETING

The term social marketing was first coined by Kotler and Zaltman in 1971 to refer to the application of marketing to the solution of social and health problems. Marketing has been remarkably successful in encouraging people to buy products such as Coca Cola and Nike trainers, so, the argument runs, it can also encourage people to adopt behaviours that will enhance their own - and their fellow citizens' - lives.

Hence, the application of these principles, social marketing, has been defined by Andreason (1994) as

the application of marketing technologies developed in the commercial sector to the solution of social problems where the bottom line is behaviour change.

Like generic marketing, social marketing offers a logical planning process involving consumer oriented research, marketing analysis, market segmentation, objective setting and the identification of strategies and tactics (MacFadyen et al, 1999) It is based on the 'voluntary exchange of costs and benefits between two or more parties' (Kotler and Zaltman, 1971).

A social marketing campaign or program contains 3 key elements (MacFadyen et al., 1999)

- a consumer orientation (Lefebvre and Flora 1988, Andreason 1995),
- an exchange (Lefebvre and Flora 1988, Lefebvre 1996, Smith 1997) and
- a long-term planning outlook (Andreason 1995).

3.1.1 A consumer orientation

In social marketing the consumer is assumed to be an active participant in the change process. The social marketer seeks to build a relationship with target consumers over time. The concept of market segments from generic marketing is used to try to categorise consumers in advance.

Social marketing, like generic marketing, was originally designed to reach large numbers of people at once. The application of the social marketing

approach in travel behaviour has used the general principles to focus on the individual (e.g. Brög et al, 1998).

3.1.2 An exchange

Social marketing also shares the exchange component of generic marketing (Kotler and Zaltman, 1971). Exchange is defined as

An exchange of resources or values between two parties with the expectation of some benefits (MacFadyen et al, 1999)

Exchange in social marketing puts a key emphasis on voluntary behaviour. To facilitate voluntary exchanges social marketers have to offer people something that they really want. In travel behaviour change projects this has been interpreted in two ways:

- offering people nothing at all rather than something they do not want, and
 - broadening the range of 'products' offered so that they do want choose something.

3.1.3 Long-term planning approach

Social marketing approaches usually begin by conducting a situational analysis of the internal and external environment and of the consumer. This assists in the segmentation of the market and the targeting strategy. Further research is then needed to define the problem, to set objectives for the program, and to inform the formulation of the marketing strategy. The elements of the social marketing mix are then developed and pre-tested, before being implemented.

3.1.4 Summary

In summary, social marketing is designed to bring about voluntary behaviour change in communities by having or devising 'products' that will influence behaviour change. These 'products' are devised by the marketer in response to an analysis of market segments and offered to people as part of an exchange arrangement. In the field of travel behaviour change the theory of social marketing has been applied to the individual.

While social marketing *in itself* is not related to the theories of influence and persuasion, its genesis from generic marketing means that that it is easy for people using a social marketing approach to voluntary behaviour change to search this literature for tips. Hence references can sometimes be heard to terms such as 'persuasion' and 'influence' (e.g. Cialdini, 2001) – terms that are important when people need to be *convinced* to change, but that were certainly not originally intended to be part of a social marketing approach.

3.2 COMMUNITY DEVELOPMENT

Community development is based on working with people to 'reflect on their lived reality, to make an analysis of the root causes of that reality and to develop a plan of action for changes' (Ife, 1996). At all stages the individual works in partnership with whatever external resources or expertise are available. It is a bottom-up collaboration based on linking individual energy and aspiration in partnership with external support and vision.

Community development programs were originally designed to effect behaviour change in some critical area of social activity – health promotion, education, family functions are some of the more familiar ones. More recently they have been adapted to patterns of resource usage, as in voluntary travel behaviour change programs in travel and in the areas of reducing water, waste and energy use (e.g. Australian Greenhouse Office, 2002).

Much has been written about the theory and practice of community development, and there are many ways of describing effective practice. The principles were first proposed by Edwards Deming (Deming, 1958) in the 1950s, but since then have been widely adapted to situations where lasting change in behaviour and collective thinking are required. The community development approach can be characterised as an unstructured, evolving response by a community to their particular needs or problems. The primary tools are listening and facilitating change rather than 'telling'.

Basically, there are four steps which, when repeated, create the cycle of 'continuous improvement'. At the community level these are:

- **Planning.** Communities themselves need to establish their particular priorities and plan the actions they will take, based on the best information available to them about options, possible outcomes, risks and benefits etc. Planning also needs to include measurement activities, consideration of "What will count as success?" This planning stage is fundamental to developing the 'ownership' that will enable the program to succeed and become long lasting.
- **Doing.** Implementation must engage people actively, whether at the individual, household or neighbourhood level. The actions we take for ourselves, rather than being passive recipients of the actions of others, are the ones that become imprinted and built upon in our future behaviour.
- **Checking.** Measuring outcomes provides critical opportunities for learning and empowerment. Again, community members need to be actively engaged in these research processes, with expert help from outside seen as resources to the community's effort rather than drivers of change.
- **Reviewing.** Evaluation of actions taken and renewed planning for the next stage completes the cycle. Here too, while external advice and assistance may be invaluable, the emphasis is on local and personal responsibility.

In travel behaviour change projects, the community development approach has been concentrated at the individual as well as the community level and is seen as helping people to help themselves. This means that the first step in any interchange is listening to see what problems or issues people may have and then working with them to find a solution. This means that in many cases the problem they solve (e.g. losing weight by walking more), while possibly addressing the decision maker's goal (e.g. to reduce congestion or emissions) may not be seen by the individual as having anything to do with this goal.

3.3 SUMMARY

Voluntary travel behaviour change approaches have been based on both the principles of social marketing and community development. While there are similarities between the approaches, there are also differences in the way they have evolved:

- Approaches based on social marketing run the risk of not benefiting the community (both individuals and society as a whole) when they have the following characteristics
 - Focus too heavily on *generic marketing* where the numbers of people who have changed behaviour becomes more important than the quality of the behaviour change
 - Rely too heavily on the market segmentation theory to exclude groups of people who are considered unlikely to change
 - Develop into a top-down, marketing focus at the expense of concentrating on the individual.

- Approaches based on community development, while ideal for helping people to help themselves – leading to truly sustainable change, can run the risk of a type of anarchical change, particularly if it is not harnessed to gain the benefits of the diffusion of the that change amongst other individuals.

4. AN APPLICATION

This final section of the paper describes a program that attempts to apply principles learned from other disciplines (Section 3) and the community development approach.

4.1 CONTEXT

Taking into account the findings of the literature cited above, and our experience over many years (e.g. Ampt, 1999, Steer Davies Gleave 2003), we propose the following context:

The car has become vital for the activities we do in the cities we live in

For many reasons the day-to-day activities we undertake often tend to be spread over a wide geographic area. Having a car to get to these activities may well have been responsible for choosing these activities, and certainly perpetuates these choices.

This means that when most people imagine a discussion about using the car less, in their minds they hear a discussion about changing activities. And it is easy for them to think in terms of less activities, less quality of life, and so on.

This means that many people will feel resistant to any discussion about using the car less.

Most people have a frustration with the car

Although our activity patterns and the shape of our cities and towns has led many people to find the car indispensable (e.g. Forster et al, 2002) nearly everyone has told us they have at least one car-related frustration. The stories range:

- 'it costs too much',
- 'I seem to spend all my time in it taking people somewhere, and I never have time for myself',
- 'I'm starting to go to places that you have to go by car, but it means I'm always relying on Mum and Dad',
- 'I can never be sure I'll get there on time',
- 'without a car I never seem to see people and feel very lonely' to
- 'I wish I had one because I don't know how to lead a full life without one'.

In other words, almost all people want to make changes to car use – but for many different reasons.

There are pressures to change

There are also pressures to change. Some of these are:

- *Congestion* has slowed down traffic and made travel times unreliable which has brought pressure for change from citizens and governments alike.
- Concern for the effects of greenhouse gases has meant that there is international and national pressure for change.
- The pollution (air, noise) of cars has also meant pressure from the public and governments.

- In some cases there are economic pressures to change. These include fuel supply and price.
- Planning legislation that creates areas within an urban area where a car is essential for reaching key activities often puts pressure on developers to *reduce inequities* by providing more local activities (so there is less need to travel) or by providing or facilitating the use of ways other than the car to reach activities.

From these two levels – the individual and the community - stems a readiness and a willingness to think and do something about how we get around.

4.2 APPROACH

From the discussion so far, it should be clear that a voluntary behaviour change program is likely to be different in every town or city, and possibly even in every suburb or area within a city. This is because different types of people will want and need slightly different types of tools and the conversations to introduce the program will reflect the language and needs of each area. In other words the participants shape the program.

However, the core elements of the approach used in Melbourne (Department of Infrastructure, 2003) are shown in Figure 2.

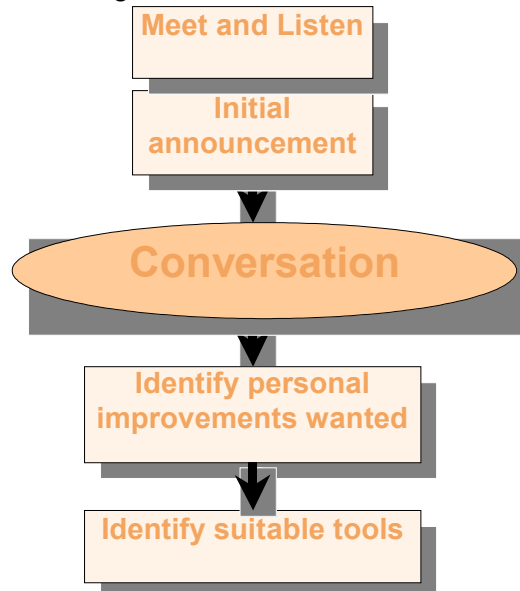


Figure 2: Core Elements of the Melbourne TravelSMART Communities Program

First, members of the project team spend time in the area (or at the school or workplace) simply meeting people and listening to the way they talk and think about the area. Then households are informed that the project is happening in their area. The most important component of the program is the conversation during which the participant and the conversationalist discuss the changes the participant and household would like to make and together they decide on a tool to help them make these changes.

4.2.1 Getting to know the area

This phase sets out to understand the local people and their perspective, become familiar with the demographics, transport infrastructure, geography and local businesses, services and facilities in the area and to integrate that knowledge and experience into all other aspects of the project.

The project areas in the Melbourne case were in three different geographic areas (of different socio-demographic and travel characteristics).

The objective of the phase was to allow all team members to become familiar with the aspects of the areas e to ensure an informed, personalised interaction with householders.

4.2.2 Engaging households

Engagement was the process of making direct contact with people. In this program the engagement process was always through a conversation.

The conversation was semi-structured and followed the approach mentioned above of establish a frustration with the car (which ranged from costing too much, to not having one) and then helping them choose a tool (see Section 3.2.3) that would assist them and other members to solve their personal dilemmas.

Most conversations (over 2000) were via phone, although some took place in the setting of a community group (ideal for reinforcement by trusted others) and still others took place at the door (in cases where people did not have a phone or could not be contacted by phone).

4.2.3 The Toolkit

The tools that were offered are detailed below.

Travel Blending[®]

Travel Blending[®] (Ampt 1997) is a tool that invites each household member to fill in a 7 day diary to find out how they currently travel. Once this information has been entered into a computer, an expert software system develops individual feedback for each person that summarises their travel and how often they used different transport modes. It also gives facts on the impact of their travel in relation to the key issue that they would like changed (e.g. better environment, more time, more money). Efficient travel throughout the week is highlighted and praised and then customised suggestions are given in line with the frustration they have identified, whether it is lack of time, money, fitness etc. They are given about a month to try what suits them and to come up with ideas of their own to try. A second diary is offered and a similar process followed. This time they are given the comparison details between the travel recorded in each diary as well as feedback and more ideas.

Households differed in terms of whether all members participated, whether they completed both diaries and so on. From a voluntary behaviour point of view people were encouraged to use the tool in a way that suited them (i.e. only once if desired), even though for the project it would have been useful if they had completed the whole process so that their impact on the environment could be measured before and after using the tool.

Journey Plans

Journey Plans were offered to people who wanted to make a trip by a new mode of transport, but did not know where to start. In addition, they were sometimes offered to someone who had taken part in Travel Blending[®] and they had undertaken a journey that could easily be done via another mode. In such situations this tool was offered as an idea rather than as a response to a request.

Personalised Journey Plans were created for public transport, walking or for those wishing to cycle. They included all information and resources that are useful for trying something new, such as a precise times for catching a bus, information on how to alight the bus, and a free public transport ticket suitable to the purpose and person, or details about bicycle parking. People were also given some existing information such as bus timetables and cycle route maps if appropriate – though in many cases people found these hard to read, and the Journey Plans themselves were sufficient.

Local Information

Some people indicated that if they knew more about local activities, they could actually save time or money by doing things locally rather than further away. In addition, they felt it would be easier to walk occasionally rather than drive, or drop into a local shop on the way home rather than make a special trip.

Hence the Local Activity Guide tool was designed to reflect the fact that travel is often based on activities, and gave information on all activities (shops, businesses, trades, transport options) in the local area.

General Information

Some people preferred general information – rather than first finding out what they do now as a means of preparing for what may suit them in the future. The General Information was presented in leaflet format – though there were leaflets for each of the main reasons people want to change (e.g. to save time or reduce stress).

Loan A Bike scheme

Some people indicated that they would like to try using a bike but were really not sure if it would suit them. An arrangement to borrow a bike for two weeks gave them enough time and opportunity to establish whether owning a bike was a viable means of transport for them.

Children's Activity Pages

When there were children in the household they were offered activities for 4 different age groups. Parents often reported helping them to do the activities, and so talked about travel together.

Ideas tool

Experience has shown that people frequently stick to a travel habit even though it irritates them, simply because they have not taken the time to think through what they are doing and why. It has not been so uncomfortable a habit that they have changed but it is something they do that does not please them.

The 'ideas tool' meant talking through the scenario and having them work out alternatives and selecting one which they could commit to by identifying just what had to do and when to make it happen, It was found to be a useful way to introduce new, more efficient travel habits.

Congratulations

Some people believed that they already travelled in an effective and efficient way. If they agreed, we sent them the full set of general information pamphlets to pass onto their friends and neighbours. In many cases people reported finding new pieces of helpful information for themselves.

4.3 EVALUATION

Part of the TravelSMART Communities program was to perform an internal evaluation to understand the levels of engagement using the processes described above. These results showed that there were considerable differences between the 3 areas in the way people chose to change, the types of tools they chose, and the things they perceived as frustrations with the car.

Figure 3 shows that a community development approach (i.e. letting people find their own solutions) can mean that different types of people benefit from having different kinds of engagement processes. For example, in Dandenong where there is relatively lower income, many people with English as their second language, and many people who are new to Australia (often refugees), the concept of 'trusted

others' could best be used in the framework of community groups. Many people who would usually have been afraid of an approach from an authority (e.g. the local government) were very happy to find ways to manage without a car (often to save money) in the context of an Adult Migrant Education Scheme.

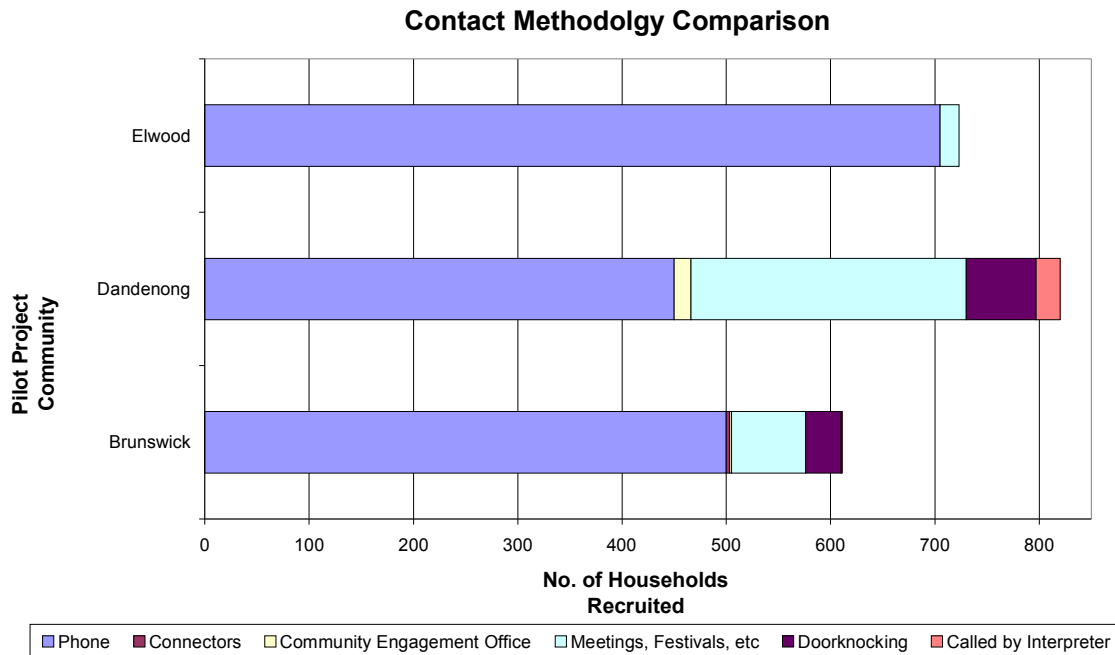


Figure 3: Comparison of Contact Methodology in 3 Areas

Similarly, in Dandenong and Brunswick where there were large numbers of people who were at home during the day (either because they were unemployed or no longer in paid work) door knocking was shown to not only be cost effective, but also to enforce the value of word-of-mouth engagement and verbal commitment to the conversationalist.

Frustration relating to:	Total %	Brunswick	Dandenong	Elwood
Time	27%	24%	25%	31%
Environment	26%	29%	16%	35%
Health	22%	20%	26%	20%
Money	19%	21%	24%	10%
Independence (old)	4%	3%	6%	3%
Independence (young)	2%	3%	3%	1%
Total	100%	100%	100%	100%

Table 1: Comparison of Key Triggers for Change in the 3 Areas

Table 1 supports the findings of the research in other areas discussed earlier, showing that lack of time and concern about the environment were the most significant frustrations, with money being relatively lower, particularly in Elwood. Even though least people were frustrated by lack of independence (usually young, pre-driver people, and older, often post-driving age people) these people were particularly grateful for the opportunities to change.

This reinforces the importance of adopting an approach where people can identify their own problem or frustration and find a solution to it, rather than trying to align their own value system with that of the client (in this case to reduce greenhouse gas emissions).

Finally Table 2 shows the different tools that were chosen by participants in the program. Again it highlights the value of an approach where people can be offered assistance in line with their own style of behaviour change. The detailed recording needed for Travel Blending® suited more people in Elwood where many more people are employed and work in office-type occupations. Similarly, Journey Plans were more frequently asked for in Brunswick and Dandenong where public transport is much more readily available, and where people may have already considered a change, but not known how to do it.

Tool	Total	Brunswick	Dandenong	Elwood
General Information	30%	28%	32%	33%
Local Activities Guide	24%	24%	23%	24%
Travel Blending®	21%	18%	18%	23%
Journey Plans	15%	17%	17%	10%
Kids' Pages	7%	9%	8%	5%
Congratulations	2%	3%	1%	3%
Loan-a-Bike	0.3%	Not offered	Not offered	1%
Ideas Tool	0.2%	0.2%	0.1%	1%
Total	100%	100%	100%	100%

Table 2: Comparison of Tools Offered in the 3 Areas

Independent consultants are also currently evaluating the TravelSMART program and results of behavioural change will be available in the next few months.

5. A SUSTAINABLE APPROACH FOR ONGOING IMPLEMENTATION

Based on the success of the approach described above, we believe that it is possible to describe the key components of an approach that can be implemented on a large scale and which can use public/private partnerships to continue its implementation in a cost-efficient way. It has the following key components:

5.1 IT IS A VOLUNTARY BEHAVIOUR CHANGE APPROACH

As discussed earlier, it is an approach where change occurs when individuals make choices for personal reward without a top-down mechanism, regulation of any sort, or a feeling of external compulsion.

The approach – that we term *Living Change* - offers people a chance to discuss the way they travel around. During the discussion we listen for any problems, frustrations or complaints that a person might have. We then work with them (through discussion) to come up with a way to **address what they see as the problem**. They choose a way to solve the problem (with our help) and their personal reward is getting rid of, or reducing the problem. An example might help.

Ellen says she finds that taking their children to school by car each day is costing a lot. But of course she wouldn't let them walk because of all the dangers, both from traffic and strangers. And she doesn't know anyone to take her child because they work all day and haven't got around to meeting other parents.

A discussion might lead to Ellen thinking of asking her child to suggest parents of children who live near her as potential car poolers. OR she might say that she knows that a bus goes past their place to the school, but she doesn't know who to ask about timetables and costs – so we might have suggested a Journey Plan.

The problem being solved for Ellen is how to save money and how to make her confident that her child is safe. It is not reducing congestion around the school or on the roads. In essence, she had not realised that she could save money, and now she has a few ways to make that change herself.

Voluntary behaviour change is characterised by its in-built sustainability. If Ellen's life is made easier (she saves money) it is likely that she will continue the change. Furthermore, there is probably a case for arguing that the process of the conversation may have made it easier for her to think of other solutions in the future.

5.2 IT CAN BE OFFERED TO A LARGE NUMBER OF PEOPLE/HOUSEHOLDS IN A SHORT TIME

It is vital that the methodology can be offered to large parts of a community or city. This means that it needs a method that is adaptable to the culture. In many cases the use of the phone can facilitate this, but in some cultures it may be more efficient to reach large numbers of people and households through visits or even through community group meetings or gatherings.

An efficient computer management system is an essential component of this type of approach.

5.3 IDEALLY, IT IS OFFERED TO HOUSEHOLDS NOT JUST INDIVIDUALS

The literature and experience suggests that change is much more likely to occur if all people in the household are involved. In travel behaviour this is particularly true. Ellen, in fact, involved her child in helping to make the change. Or someone who wants to save time might ask another household member to pick something up on the way home from work.

Members of a household work as reinforcers of change.

5.4 IT MUST BE POSSIBLE TO OFFER IT THROUGH MANY 'ENTRY POINTS'

As noted earlier, change theory talks about the importance of 'trusted others' in helping people change. You are more likely to try a new restaurant if you have heard about it from someone whose views on food you trust and are similar to yours than if you have heard about it from someone whose values are very different from yours.

This is one of the reasons that offering change through households is important.

But there are many other places where there are groups of people who share values or interests. These include workplaces, schools and community groups.

Future applications need to be designed so that it is easy to have conversations in any of these places. The conversations could take place in the following ways:

- By telephone
- Face-to-face at a door
- Face-to-face at an event (e.g. festival)
- Face-to-face in a group

You will notice that it does not cater for a 'conversation' by mail. This is because we have discovered (and are supported by a lot of psychological literature) that word of mouth is the most appropriate way for successful engagement to take place.

5.5 BEHAVIOUR CHANGE TAKES TIME

We have discovered in all our projects, that the absolute minimum time during which a project should be running (i.e. after set-up) is 6 months. This is because change takes time. While many changes can take place straight away (like walking to work

on a sunny day), others can only occur much later (like deciding to send a child to a closer school).

5.6 THERE ARE ADVANTAGES IF IT INCLUDES TRAINING

The way voluntary change projects are currently being implemented is for a consulting firm to carry out the project for a client. This means that in most cases there are no ongoing initiatives in that area or even elsewhere in the city (other than where a community development approach leads to some ongoing change).

It is therefore becoming increasingly important that models are developed where local people (from a local authority or from the local community) are trained during the course of initial implementation so that they are able to continue programs in the region after the initial intervention is completed

6. CONCLUSIONS

The paper has presented evidence from the literature (primarily non-transport) about the importance of understating people's motivations in order to bring about voluntary behaviour change. It highlighted key factors of importance in devising a behaviour change approach. It then showed the value of using a community development approach by reviewing the literature and highlighting the differences between this approach and approaches that focus rather strongly on marketing-derived maxims.

The paper showed an application where a community development approach was used, and where as many principles as possible from the remaining literature were applied. This gives evidence that a multi-faceted approach, based entirely on word-of-mouth and using a technique that allows people to choose their own reason for change and their own mode of change can be successfully offered and taken up on a large scale.

Finally the paper describes a model that builds on current experience and allows local communities to gain skills to implement change themselves.

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