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OVERCOMING OBSTACLES OF CAR CULTURE: PROMOTING AN ALTERNATIVE TO CAR DEPENDENCE INSTEAD OF ANOTHER TRAVEL MODE

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Abstract

Car advertising is about fashion and lifestyle rather than the convenience of a particular car for a specific market segment's travel needs. Yet public transport markits its convenience for some trip components. Has this strategy proven effective?

Public transport is not an adequate alternative for car dependence as it cannot meet the majority of the diverse travel needs of most of the population. However, when combined with walking and cycling, the three Environment Friendly Modes (EFMs) together can offer a viable alternative to the car for most travel needs.

This paper explores the effectiveness of promoting EFMs as a group rather than the promotion of public transport alone, drawing from travel behaviour and social marketing theory. It then examines the process and results from the Individualised Marketing (IndiMark) travel behaviour change technique within the context of promoting an alternative to car dependence.

Future actions are recommended to explore the complementary nature of walking, cycling and public transport and how best to market these to convince car dependents to take the risk.

Introduction

Car advertising is rarely about selling the convenience of a particular car for a specific market segment's travel needs. They sell fashion and lifestyle, not travel. Cars can do this because they are firmly entrenched in most people's households and in their minds, a result of their phenomenal rise to dominate the travel market over the last century.

Public transport on its own is not an adequate alternative to car dependence. For long term success other than on the margins, an adequate alternative to the car must be presented to travellers. This affords the opportunity when life stages progress, a home location choice, other event or specific car crisis occurs, for the person to rethink their required level of car ownership. With city rejuvenation and growing influence of new urbanism, village centres, nodal development and car sharing clubs, these occasions can occur relatively frequently. Approximately 3 of 10 households already make a car purchase decision each year (Botting, 2003). With many households owning multiple cars, there appears significant opportunity to impact car ownership levels in a 2 to 5 year time frame. The most effective way to achieve this is by reducing the perceived need for a car.

To reduce the perceived need for a car, people should be offered a package of services or benefits combined to form an alternative that is satisfactory for most trips and only requiring supplementing by occasional car access or taxis.

The Environment Friendly Modes (EFMs), together, can meet the majority of trip needs for the majority of the population. This has been demonstrated for Perth, a car dependent city in Australia, by its transport agency in a report on the potential of each mode to meet trip needs (James, 1999). For this analysis a set of rules was adopted to gauge the suitability of each mode for each trip that was made by the sample population. The conclusion, for a city with 80% of trips by car as driver or passenger, was that public transport, walking and cycling could each cater for approximately an additional 20% of the entire travel market without any significant time or cost penalties for the people. Together the EFMs could cater for 60% of all trips thus eliminating car dependence for much of the population.

When packaged together, the EFMs can form an alternative to the car. For households with multiple cars, there is significant opportunity to reduce the number of cars owned by promoting a culture or lifestyle that uses EFMs regularly and only requires car access occasionally. Some public transport operators may be hesitant to market cycling as it can be a significant competitor for some market segments. Its role in facilitating lifestyles with reduced car ownership needs to be considered. The level of use of public transport by those who are primarily cyclists should also be compared with those who are primarily car drivers. Further research and longitudinal studies would be valuable so that we can better target interventions to achieve these large step gains through car ownership reductions.

The longer term gains of marketing EFMs together at this stage could be considered a bonus. The immediate changes in travel behaviour and their sustainability is the primary measure of success. In addition to forming a viable alternative to cars, there are other benefits specifically for public transport when marketing EFMs together. Public transport is generally not a door-to-door service so the trip usually requires one or two walking trip legs or other means of access to and from the public transport service. People base their travel decisions on the entire trip, not just the public transport leg. More awareness and familiarity with walking will reduce the perceived burden of these trip legs and make it more likely that public transport will be chosen. Research suggests that customers are most sensitive to waits for services and delays followed by walking to or from a service, and least sensitive to time on a bus or train while moving. The same point is relevant to cycling where it is used to access a public transport network from a broader catchment area than walking facilitates.

The next stage of this paper presents and analyses results of a number of Individualised Marketing (IndiMark) programs from around the world. The example of IndiMark and social marketing theory will form the basis of the discussion to follow.

Results of IndiMark

IndiMark, as developed and implemented by Socialdata GmbH from Germany, is a technique that is demonstrating success and generating interest and debate in the transport sector across the world. IndiMark markets the EFMs of walking, cycling and public transport as alternatives to car as driver trips. It evolved from experience in the travel surveying and public transport marketing fields and utilises a range of social marketing and other concepts. The specific methodology is not discussed in detail in this paper, more information can be found in Brög et al (1999), James (2000) or Marinelli and Roth (2002).

This paper examines the success of IndiMark and explores the concepts and assumptions in the process that may have contributed to the success. The starting point is to measure the performance of the program using an indicator that clearly translates to business and travel outcomes. The performance indicator measured is mode shift from car as driver to alternative modes, reported as number of trips per person per year and as percentage change from previous

mode share. This data is reported across a number of pilot programs in different countries to gauge variance in results, as shown in Table 1 and Table 2 below. The data was provided by Socialdata GmbH from publicly available reports for each program.

Table 1 Average change in trips/person/year for all IndiMark participants

Mode	Brisbane Australia	Frome England	Gloucester England	South Perth Australia	Viernheim Germany	Mean	Std Dev
Walking	**18**	**31**	**25**	**22**	**15**	22.2	6.2
Bicycle	**1**	**3**	**16**	**21**	**19**	12.0	9.3
Motorbike	**2**	**-1**	**-4**	**0**	**-1**	-0.8	2.2
Car as driver	**-60**	**-24**	**-37**	**-67**	**-33**	-44.2	18.4
Car as passenger	**-14**	**-14**	**-13**	**9**	**-11**	-8.6	9.9
Public transport	**20**	**5**	**13**	**15**	**11**	12.8	5.5
Total EFM	**39**	**39**	**54**	**58**	**45**	47.0	8.7

Table 2 IndiMark change in mode share as a percentage of initial mode share

Mode	Brisbane %	Frome %	Gloucester %	South Perth %	Viernheim %	Mean	Std Dev
Walking	**16%**	**11%**	**10%**	**16%**	**6%**	12%	4%
Bicycle	**6%**	**60%**	**133%**	**91%**	**13%**	61%	54%
Motorbike	**200%**	**-50%**	**-33%**	**0%**	**-9%**	22%	102%
Car as driver	**-10%**	**-6%**	**-9%**	**-10%**	**-8%**	-8%	2%
Car as passenger	**-5%**	**-7%**	**-6%**	**4%**	**-9%**	-5%	5%
Public transport	**33%**	**10%**	**41%**	**21%**	**24%**	26%	12%
Number of participants	1109 persons	553 persons	515 persons	865 persons	480 persons		

The data reported in Tables 1 and 2 show that significant increases were achieved for all the EFMs in all of the five programs. A consequent decrease was achieved for ‘car as driver’ mode in all programs, ranging from a minimum of 6% to a maximum of 10%. The ‘car as passenger’ mode decreased in four of five programs although it was not a target for change.

EFMs increased by an average of 47 trips/person/year, or 26%, with a range from 39 to 58 trips/person/year. Public transport use increased by an average of 12.8 trips/person/year, or 26%, with a range from 5 to 20 trips/person/year, representing 27% of the total increase in EFMs. Cycling increased by an average of 12 trips/person/year, or 61%, with a range from 1 to 21 trips/person/year, representing 25% of the total increase in EFMs. Walking increased by an average of 22.2 trips/person/year, or 12%, with a range from 15 to 31 trips/person/year, representing 47% of the total increase in EFMs. These results are not weighted by the number of participants in each IndiMark program.

All 3 EFMs increased in all of the IndiMark programs but the extent of impact for each varied substantially. This variation does not appear to be based on any broad cultural or travel pattern criteria.

The Brisbane and South Perth programs were both in large Australian cities where car as driver is clearly the dominant mode. Cycling has very low usage due primarily to the longer distances needed to access people, goods and services in these car-oriented environments. Both cities achieved substantial increases in walking and public transport, but cycling was only increased in South Perth. With similar climates and levels of access to facilities, the difference in cycling increase cannot be explained other than by geographical landscape. The Brisbane program was undertaken in very hilly terrain where many road gradients are too difficult for convenient cycling. The South Perth program was undertaken in a flat local area without these constraints. Even though both had very low initial mode shares for cycling, there was clearly more potential for cycling in South Perth.

Frome, Gloucester and Viernheim are all European towns where the EFMs can more effectively compete with car as driver. Gloucester and Viernheim had reasonably similar results. Frome, however, experienced a large increase in walking but poorer results for public transport and cycling. Frome is a much smaller settlement than Gloucester or Viernheim, so it has a less developed public transport system and good access for walkers to many services. It appears again that local considerations for the program area determined the relative benefit experienced by each of the 3 EFMs.

More detailed analysis of local issues compared with IndiMark results is required to assess the extent to which these could be used to estimate relative increases in specific modes. This would then assist with identification of optimal program areas for IndiMark implementation, dependent on desired outcomes.

These results allow a number of conclusions to be made:

1. IndiMark is consistently successful at achieving the core outcome of reducing car as driver trips by increasing EFM trips.

2. IndiMark is applicable to a broad range of cultures and travel patterns as it was successful across the 5 cities, with their varied cultures, land use patterns and mode shares.

3. IndiMark increases all 3 EFMs (walking, cycling and public transport) but the extent of impact for each can not be determined using broad cultural and travel pattern criteria. Consideration of local issues is required to better estimate outcomes for each mode.

Discussion

The success of IndiMark at reducing car trips and increasing EFM trips demonstrates the importance of the principles and issues related to travel behaviour and social marketing that have been incorporated into the design and implementation of the program. This Discussion seeks to explore many of these points to inform future marketing practice.

Mode choice is a social issue

Travel behaviour is a fundamental aspect of our culture, determining how and what people access, be they interactions with other people or goods and services. Changing travel behaviour is thus a social issue, not just a matter of changing the economic drivers. The social marketing field will provide relevant and valuable insights from experience with other social issues such as public health.

Awareness campaigns are designed to bring issues and products into perceptions. This is usually not sufficient however to bring about changes in attitudes and behaviours as these are shaped by habits, interests, feelings, and beliefs, among other factors. Commercial marketing for public transport has generally struggled to make any impact on the market dominance of the car.

Social marketing was introduced by Philip Kotler and Gerald Zaltman in 1971. The concept combines traditional approaches to social change with commercial marketing and advertising techniques. Its originators define social marketing as "the design, implementation and control of programs aimed at increasing the acceptability of a social idea or practice…" (Kotler and Roberto, 1989).

An integral part of ideas are beliefs regarding certain issues and the way they should be dealt with. These beliefs range from general world views to culture-specific notions or identification with a group, to a person's self-image. Ideas also include attitudes toward people, things, concepts, or events. Our approval or disapproval of them depends largely on our individual value premises.

The social marketing mix

Like commercial marketing, the primary focus is on the consumer: on learning what people want and need rather than trying to persuade them to buy what we happen to be producing. Marketing talks to the consumer, not about the product. The planning process takes this consumer focus into account by addressing the elements of the "marketing mix." This refers to decisions about 1) the conception of a Product 2) Price, 3) distribution (Place), and 4) Promotion. These are often called the "Four Ps" of marketing. Social marketing also adds a few more “P’s”, namely Partnership and Policy. Some of this material has been adapted from work by Nedra Weinreich on www.social-marketing.com.

Product

The social marketing "product" is not necessarily a physical offering as it often includes more intangible ideas (e.g., environmental protection). In order to have a viable product, people must first perceive that they have a genuine problem, and that the product offering is a good solution for that problem. The role of research here is to discover the consumers' perceptions of the problem and the product, and to determine how important they feel it is to take action against the problem.

Mobility is a relatively closed market with people on average undertaking about 2 activities per day, requiring about 3 trips and 1 hour. These values are consistent across cultures and through history. The perceived increase in mobility over the last 50 years is an increase in the length of trips facilitated by the rising mode share of cars and their higher average speeds. To decrease car use or average trip length we need to reduce car mode share.

Mode choice decisions are dependent on subjective perceptions that usually differ significantly from real situations, a result of incomplete information as well as distorted perception. Changing these subjective perceptions using communication instruments are usually cheaper and can be just as effective as changing the “real world”.

Most people have a general awareness and some personal concern of the problems of car traffic. The challenge is to transfer this to social acceptance and make it desirable to change behaviour. The new attitudes and behaviours then need to be supported and stabilized or maintained.

Most people expect a continuing rise in the level of car traffic and almost everyone views this as negative. This issue assists programs like IndiMark to engage participants to help grasp the consequences of the negative trend and consider personal action.

A positive subjective disposition is necessary for more supportive attitudes and changes in behaviour. IndiMark can help generate this to support new infrastructure or services. It achieves this through a more rapid ramp up of patronage immediately after introduction. Greater utilisation early avoids resentment associated with underutilized services; improves financial returns; and generates its own momentum for additional improvements.

Price

The total cost of adopting a social idea or practice often goes beyond the monetary price alone, as further cost-related factors are typically involved: the time lost or spent (in travelling and waiting, for example) together with perceived barriers to adoption-be they psychological, social, or physical. Reducing such costs and creating incentives to adopt and maintain the new idea or practice over time is thus another central task of social marketing.

If the costs outweigh the benefits for an individual, the perceived value of the offering will be low and it will be unlikely to be adopted. However, if the benefits are perceived as greater than their costs, chances of trial and adoption of the product is much greater. Fear of perceived negative results can likewise impede adoption of a new practice. Whether fears of this kind can be dispelled and people can be persuaded of the advantages they may expect depends on the clarity of the message, its sensitivity to the target group's concerns and cultural considerations, and its plausibility.

Price serves to position a product, as it is frequently viewed as an indicator of quality and attendant prestige value. High price is often equated with high quality. A marketing campaign that establishes a dialogue through personal communication with all participants involves significant expense. To maximise penetration, this service can be offered at no cost to participants. This increases public transport use without discounting fares and supports the desired objectives of high quality services and perceptions. Adding value to public transport with such a campaign avoids the reduction in prestige that may be associated with other inducements or discounts aimed at increasing patronage.

Place

"Place" describes the way that the product reaches the consumer. For a tangible product, this refers to the distribution system--including the warehouse, trucks, sales force, retail outlets where it is sold, or places where it is given out for free. For an intangible product, place is less clear-cut, but refers to decisions about the channels through which consumers are reached with information or training. This may include doctors' offices, shopping malls, mass media vehicles or at home by person, phone, mail or email. Another element of place is deciding how to ensure accessibility of the offering and quality of the service delivery.

A large proportion of travel is from home or to home. Some travel is for the household's needs (for example, shopping) and some is for individual needs. Access to a car is a major factor in mode choice decisions. If one household member who usually uses a car (for example, for commuting to work) is targeted, then an opportunity may arise for other household members to use the car if it is no longer needed for the commute. The ideal place to capture the majority of trip needs and control for issues such as car access is at the home, targeting all household members.

Promotion

Promotion consists of the integrated use of advertising, public relations, media advocacy, personal selling and entertainment vehicles. The focus is on creating and sustaining demand for the product. Research is crucial to determine the most effective and efficient vehicles to reach the target audience and increase demand. The primary research findings themselves can also be used to gain publicity for the program at media events and in news stories.

As a rule, the communication channels selected should be ones the target audience comes into contact with on a regular basis as well as perceives as being credible, since familiarity with a medium and with the performers makes it easier to get the message accepted. Mass media are undoubtedly the most important "vehicles" for creating awareness of social products as well as for distributing non-tangible products. But their effectiveness varies greatly.

Notwithstanding the great importance and obvious success of mass media in social marketing, interpersonal contacts and the services associated with them remain indispensable. Mass media can arouse interest, but personal consultation or motivation by promoters makes all the difference between merely knowing about something, having a positive attitude toward it, and actually adopting the new behaviour. Personal communication reinforces every other channel, and it takes on primary importance wherever modern mass media fail to penetrate or are underused.

The automotive industry has overwhelming influence through the mass media, being a significant proportion of total mass media advertising revenue. There may be some opportunities to parody automotive advertising by making an attention-grabbing twist to a familiar theme. In general, however, EFMs have little possibility of achieving any meaningful market impact through the mass media due to the automotive industry dominance. Other channels are thus required to deliver the primary marketing impact. Personal communication is a means that can overcome the automotive pre-conditioning through the power and customisation that can be generated from direct contact, especially when a dialogue or relationship is established.

The complexity of public transport, or the effort needed for people to find the information and understand how to use the product successfully, is the biggest constraint on public transport in car dependent cities (James, 1999). A dialogue is also the most effective way to work through these barriers.

All people travel and most of the factors that impact decision making relate more to the purpose of the journey and the availability of modes than to the type of person. Targeting or segmenting the market using demographic or other characteristics may not therefore prove valuable when seeking goals on a community scale. It is nevertheless worthwhile to target resources where the greatest impact can be achieved. The stages of change theory identifies psychological processes people undergo and stages they reach as they adopt new behaviours. Changes in behaviour result when the psyche moves through several iterations of a spiral process that starts with precontemplation, continues with contemplation, preparation, and action, and finally ends with maintenance of the new behaviour (Prochaska et al, 1992).

IndiMark uses an initial segmentation process to remove the pre-contemplators from further treatment. This also reduces any negative feedback as those not interested in considering or using EFMs are not disturbed or harassed in any way. The contemplators and those in preparation have an intention to change, so they receive the greatest level of support to transition to the action stage. Those already in the action stage receive a reward to acknowledge their previous good efforts and are offered further support to assist in maintenance of the behaviour. Segmenting by preparedness to change facilitates cost effective marketing as the resources are directed where they have the greatest impact.

The initial segmenting facilitates a focus on all important travel markets, taking advantage of the customisation that dialogue marketing allows:

- prevent the loss of existing supporters
    - current customers with positive perceptions will continue to use transit and be advocates through word of mouth
- intensify the use from existing customers
    - a significant portion of the population are occasional public transport users
    - the easiest new trips to capture are from those who already use the service as they usually have the lowest barriers to change
    - a large portion of current public transport passengers are choice users
- gain additional customers
    - contemplators require more intensive treatment but can lead to the large step changes that we desire.

Policy

Social marketing programs can do well in motivating individual behaviour change, but that is difficult to sustain unless the environment supports that change for the long run. Often, policy change is needed.

Grouping the 3 EFMs creates a more powerful policy lever than the marketing of public transport alone. The focus is more able to be shifted away from issues such as public transport subsidies and specific negative impacts on communities or traffic. The inclusion of all the main car alternatives broadens the policy framework to include the negative impacts of car traffic and the potential benefits of all the alternatives, including the social and environmental issues of safety, amenity, pollution, social interaction, physical activity, and so on.

Most people are very interested in traffic policy yet they understand little of the related public discussion. Through establishing a dialogue with participants, IndiMark is able to lever the high level of interest and raise the low level of comprehension.

Partnership

A powerful message requires groups throughout the community to come together in a coordinated effort. We need to identify the organizations with similar goals and find ways to work together. By pooling resources with other organizations, we have a greater impact as well as access to new audiences. Building connections with key people and organizations has the potential to bring additional attention and credibility to the program.

Grouping the 3 EFMs is a powerful strategy to engage more stakeholders, including the obvious industry and user groups and advocates supportive of walking and cycling. In addition to these, however, the policy framework discussed above can generate whole of government support and engage a broad coalition across the full spectrum of social, environmental and urban policy areas.

Partnerships can raise revenue from a number of sources, reducing the burden on one provider (for example, the public transport operator). They also facilitate supportive decisions in senior management and other agencies; increase the skill base of the marketing team; increase the power of the message; and engage a broader community. These are all powerful mechanisms to achieve desired outcomes.

Marketing the 3 EFMs together is an example of providing packages of benefits that have purchase value and value of use, a Product-Service Package (Bodmer, 2001). Bodmer uses this increased value package to promote the integration of transport and land use to generate client loyalty by fulfilling a range of activities at one site. The packaging of the EFMs can similarly add value by fulfilling a broader range of travel needs for each person.

IndiMark has high costs per participant compared with commercial marketing approaches to public transport because of its intensive nature. Much of the cost in dialogue marketing is in establishing

the contacts, so only a small proportion is saved by marketing public transport alone. A marginal increase in the time of engagement and range of offerings has little impact on total cost yet it allows more scope to engage participants. For example, dialogue based initially on a desire to walk for health reasons can easily progress to a decision to walk to the bus or train stop at least once a week for the commute to work. Once the public transport is being used, the barriers are lowered and perceptions usually improve, leading to perhaps another regular user.

Focus on customers

Market research is crucial to understand the travel behaviour of participants as well as the obstacles or influential factors in decision making across the target groups. Moreover, the selection of appropriate channels of communication; adequate exposure to the message; the ability of the products and services to meet the expectations created; as well the continuity of the entire social marketing package, are all crucial to the success of the campaign.

Socialdata has developed and used a household travel survey process for over 30 years. Through a dedication to customer satisfaction and the long history of design and process optimising, they are able to consistently achieve response rates between 60% and 80% for mail-back surveys with telephone support. This represents world's best practice for travel surveying and mail-back surveys in general.

Socialdata have brought these same objectives and experience with public transport marketing to the IndiMark program. In this process, the only lever available to change the person's travel is the dialogue that is established and the information or skills that can be transferred as part of this dialogue. Establishing and maintaining each person's trust is both the critical success factor and the most difficult task. One problematic contact, delay or piece of inappropriate information can trigger the loss of a participant.

The authors experience in over-viewing the Brisbane IndiMark pilot program supports the conclusion that an absolute commitment to customers and a work process and environment focussed on quality is essential to success.

TravelSmart Australia.

The first IndiMark results from the original trial in South Perth were published in 1998. Since then there has been a growing level of interest in the field of travel behaviour change across Australia. Using the brand name "TravelSmart", most states and territories in Australia have now implemented pilot programs based on IndiMark or similar methodologies designed to encourage the adoption of new behaviours without the use of punitive measures.

In 2000, a long process of policy development and collaboration began to progress the implementation of these methodologies across the country. The process was led by state transport agencies but also included a broad partnership of federal agencies (greenhouse, environment, transport), local government and public transport associations. This was supported by a number of other state agencies and from a range of Non-Government Organisations in the health, aged, community and environment sectors. This broad policy framework and partnership has now resulted in the establishment of "TravelSmart Australia". This is a 4 year $18million program funded primarily by state transport agencies and the Australian Greenhouse Office but including many contributions from other sources. As this money is in addition to existing commitments, it is a large step forward for travel behaviour change in Australia, a country with a population of only 20 million.

Information is available on the website at www.travelsmart.gov.au.

Conclusion

This paper has demonstrated the value in packaging walking, cycling and public transport to form an alternative to car dependence. Travel behaviour and social marketing concepts have demonstrated the many advantages of marketing all EFMs together rather than public transport alone. The analysis of IndiMark results from pilot programs around the world has demonstrated the success of the methodology, translating theory into real world results.

Further development and implementation of dialogue marketing, taking into account the discussion in this paper, will advance the cause of all EFMs and move our societies one small step away from car dependence. With continued vigilance, this can impact trend growth and policy development to increase the opportunities for more significant and structural measures supportive of EFMs in the future.

Once a car has been purchased, it makes little sense not to use it. The challenge to achieve further step increases in EFM will need to target the car purchase and disposal triggers, in addition to continued marketing of EFMs.

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