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# **The effect of public communication campaigns on family communication and behaviour.**

**A thesis presented in partial fulfilment of the requirements for the  
degree of Masters of Business Studies in Communication  
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## **Abstract**

This thesis examines how mass communicated messages from a public communication campaign affect interpersonal communication within families. It also considers how interpersonal communication among family members flows on to affect behaviours in the family. The study uses McDevitt and Chaffee's five-stage sequence of behavioural activation within families to examine two pro-environmental campaigns: the Big Clean Up and Clean Up NZ.

Seven families exposed to the messages of the communication campaigns were interviewed to gain an understanding of what communication process occurred as a result of these interventions. "Downward" (parent to child), and "upward" (child to parent) flows of communication were examined.

The results suggest that communication among family members has a substantial bearing on a family's behavioural response to campaign messages. However, the person who engenders the discussions also plays a major role in the success or otherwise of the communication outcomes. The campaign messages had different effects on children than they did on parents. There were no significant behaviour changes in families where the parent was the initial message receiver; however where the child provided the initial intervention behaviour changes tended to occur. While children received new information, and developed new behaviours based on the campaign messages, parents tended to have existing beliefs and patterns of behaviour endorsed.

The relationship between interpersonal family communication, campaign messages and changes in behaviour has implications for communicators developing campaigns that aim to change behaviour.

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## Chapter 1: Introduction

The need for organisations to communicate with relevant stakeholders is becoming increasingly important and ever more difficult to achieve effectively. The use of communication campaigns to target the community, or sections of it, has become increasingly prevalent (Rice & Atkin, 2001). An example of this can be seen in New Zealand with organisations that appeal to the public for fundraising; 48 of the 52 available weeks each year are nominated as named weeks in recognition of a particular need or goal by organisations attempting to fundraise. In some weeks more than one organisation is appealing for donations (for example, IHC, Salvation Army, Guide Dog appeal) (Fundraising Institute of New Zealand, 2003). Each of these weeks is supported by a flurry of information intended to inform and motivate the message receiver into a desired response – in this case, donating money. In addition there are a number of wider public organisations (local councils, Non-Government Organisations, Government agencies such as the Land Transport Safety Authority (LTSA)) pushing their messages: don't drink and drive, wear a life jacket, 5 + 5 a day. Also, taking into account the numerous commercial campaigns from organisations endeavouring to attract a person's discretionary income, the challenge of attracting and maintain public attention is increasingly difficult for communicators (Watson, 2003). Information bombards our senses from every conceivable source, every waking moment of the day. With the advent of technologies such as the Internet, email and text messaging, communication channels have grown in number in recent years.

In our society, communication is the organising element among humans and is the way we obtain information about our environment (Hanneman & McEwen, 1975). There are numerous ways in which this communication can occur. In fact, according to Watzlawick, Beavin and Jackson (1967), in their now famous adage, "one cannot *not* communicate" (p. 48) – anything one does potentially communicates to others.

## **1.1 Purpose and context of the research**

In the modern mass communications environment messages from any given organisation will be competing with hundreds, possibly thousands, of messages each day in all forms of media. In New Zealand alone, with a population of just over four million people, there is a choice of some 600 local magazine titles, over 300 metropolitan and community newspapers, 45 TV channels, and a radio station for every 18,000 people, with 30 in Auckland alone (Jayne, 2000). While the level of resources available to an organisation wishing to communicate is a significant factor in the success of the communication, it is certainly not the only component. Other factors may include creative design, preliminary research and alignment of media to the audience (Schiffman & Kanuk, 2003).

Professional communicators need to understand the communication process and how the intended receivers may utilise the messages that confront them. Without this knowledge, messages may be sent without regard into an endless space of mass communication messages. With an in-depth knowledge of this process message senders are able to design a strategic communication programme. This should alleviate some of the randomness that communicators have argued is associated with mass communication.

This research is composed of two parts. The first is an investigation of two public information campaigns and the role they play in mass communication. The second is an exploration of how those messages stimulate interpersonal family communication among message receivers, in this case family members. Of particular interest is an examination of whether and, if so, how the messages affect changes in behaviour patterns of family behaviour as a result of communication.

Rice and Atkin (1994) define public communication campaigns as:

“purposive attempts to inform, persuade, or motivate behaviour changes in a relatively well defined and large audience, generally for non-commercial benefits to the individual and/or society, typically within a given time period, by means of organised communication activities involving mass media and often complemented by interpersonal support” (p. 427).

The flow of communication and its effects were closely studied. That is, where information enters the family either through an intervention by parents or children, this information then travels to other family members in an upward (child to parents) or downward (parents to children) direction. The flow of communication within families provided the basis of this study. The outcomes from communication flow, whether up or down, it was thought, would offer findings suggesting better ways to manage communication in the future.

Blumler and Gurevitch (1975) looked at the relationship between mass communication and interpersonal networks and considered the two sources as complementary, because they served similar functions (Chaffee, 1982). This was a significant departure from the received wisdom of Lazarsfeld, Berelson, and Gaudet (1944), for whom interpersonal influence counteracted that of mass media. However, there is a limited amount of research into the relationship of mass and interpersonal communication and any correlation the communication has to behaviours (Chaffee, 1982). McDevitt and Chaffee (2002), Chaffee (1982) and Rice, Borgman and Reeves (1988) have made important contributions to developing an empirical understanding of the relationship between communication and behaviour. This current study aims to continue these beginnings and add to this body of knowledge.

## **1.2 Research objectives**

An exploration of the literature for this thesis drew attention to the limited research that has been done within the New Zealand communication campaign context. The literature review showed there was little basis on which assumptions could be made about how messages from public communication campaigns affect communication and behaviour in families. There is, however, a significant amount of published material to support research that has been conducted overseas, such as in the United Kingdom or the United States of America. This does not allow for accurate comparisons between the New Zealand context and that of the other countries.

The project was based on the following research questions:

How do public communication campaign messages impact on family interpersonal communication and behaviour?

Specific objectives include the examination of:

- interpersonal communication within the family unit relating to mass communication messages surrounding the Big Clean Up and Clean Up New Zealand campaigns (the details of these campaigns feature later in this chapter)
- different effects of the upward and downward communication flows
- the relationship between messages sent from a strategically developed communication campaign and the behaviour changes in families.

It should be noted that this study examined communication campaigns that are publicly-focused. The distinction between public and private communication campaigns is important to establish. While many characteristics of public and private campaigns are similar, for example, design and media selection, the main differences are found in outcomes. Public-focused organisations will have objectives and outcomes based on a civic good, as opposed to private organisations who will be seeking a commercial gain. A practical example of this is the Land Transport Safety Authority (LTSA) producing messages to encourage

motorists to wear safety belts, as opposed to a private campaign where McDonalds communicates messages to highlight an organisational move toward healthier food alternatives. While the functionality of the campaigns is similar, the LTSA is looking toward a greater community good where McDonalds is striving to achieve organisational goals. Organisations such as McDonalds and other corporate organisations often have more resources available to them to communicate their messages than public organisations. Marketing theory (Ehrenberg, Goodhardt, & Barwise 1990) suggests this places public organisations at a disadvantage in capturing the attention of the public. This research endeavours to analyse the communication campaign process in order to establish ways in which public organisations can communicate messages more effectively. Often these messages are beneficial to the community as a whole, and it is important, both to ensure that messages sent from public organisations are able to compete in the intense mass communication environment and also to see positive behaviour changes as a result of the messages.

### **1.3 A background to the campaigns**

The Big Clean Up and Clean Up NZ campaigns selected for this research are detailed in this section. The section provides some background to the history of the organisations that manage the campaigns, and details the philosophy behind their design. The two campaigns are examined individually, followed by some analysis of the campaigns' shared elements.

#### **1.3.1 Campaign 1: The Big Clean Up**

One of the purposes of the Auckland Regional Council (ARC) is to protect the region's air, soil and water resources from pollution and to ensure their sustainable use as Auckland, the largest city in New Zealand with a population of 1,074,510

people (Statistics New Zealand, 2001), develops and its population grows. The ARC also manages the growing demands on the region's transport systems, and supports public transport services (Auckland Regional Council, 2003).

The ARC works to manage the pressures on the Auckland region's environment in a number of ways. The region's overarching blueprint is laid out in the Regional Growth Strategy, developed by all Auckland's city and district councils in conjunction with the ARC (Auckland Regional Council, 2003). It aims to ensure that Auckland regional growth is accommodated in a way that best meets the changing needs of the diverse communities and takes an integrated approach to the long-term management of the Auckland region. As part of this responsibility the ARC developed a campaign, The Big Clean Up (BCU), to enable the residents of Auckland to participate effectively in the environmental restoration and sustainability of the city through pro-environmental behaviours. These include: reducing waste, use of public transport, conserving energy, and proper use of storm water drains. The campaign, which began in 2002, is an ongoing programme.

Residents are encouraged to register with the council to be part of the BCU. They can do this by supplying information on the Internet, [bigcleanup.co.nz](http://bigcleanup.co.nz), or by calling the ARC's 0800 number. The ARC then sends out information about the campaign and instructions as to how the receiver can participate in the programme. As at April 2003, 44,000 households had registered to be part of the BCU (Auckland Regional Council, 2003).

Once registered with the programme, participants are encouraged to adapt their behaviours toward those deemed more pro-environmental. These include reducing the amount of rubbish they throw away, reducing cars trips by two a week, having their cars tuned every 6 months, and recycling waste. The ARC continues to communicate with people who registered with BCU by supplying new information about activities and opportunities for maximising their participation.

### **1.3.2 Campaign 2: Clean Up New Zealand**

The vision of Clean Up New Zealand is to take positive environmental action as an essential investment in the health of New Zealand. The work of the Clean Up New Zealand Trust and its sponsors provides resources so “every New Zealander can make an active contribution to ensure that New Zealand can truly say it is the cleanest greenest country on earth” (About Clean Up NZ, 2003, ¶ 1). The Clean Up NZ campaign is held in partnership with the United Nations Environment Programme, and internationally is now in its 11<sup>th</sup> year (About Clean Up NZ, 2003).

The objectives of the Clean Up New Zealand campaign are:

- To provoke Kaitiakitanga/stewardship, personal ownership and individual responsibility for the environment to all New Zealanders.
- To support and promote ‘Towards Zero Waste’ as the underlying concept in all our actions.
- To encourage 250,000 children, young people and their families to actively participate in Clean Up NZ Week 2003 (Clean Up NZ, Campaign Plan, 2003, p. 2).

Clean Up NZ is under the governance of a board of trustees who comprise members of environmental and education agencies along with business representatives. The Trust employs one person full time to manage the operational aspects of Clean Up Week and its day-to-day operation. According to the Clean Up NZ website (2003) the objectives of the Clean Up NZ trust are:

- To plan, promote, and co-ordinate a voluntary nationwide campaign, supported by established service providers, to clear waste from public areas, roadsides, parks, waterways and forests.

- To create a national media focus to raise awareness among the public, local and central government and the commercial sector of the urgent need to minimise, manage and recycle waste.
- To educate and encourage individuals to be proactive, to enhance their local environment and address New Zealand's and the world's growing and environmentally dangerous waste management issues.
- To gain industry co-operation in developing processing and packaging techniques that minimise and eliminate litter. To enable New Zealand to be promoted as a litter-free destination.
- To identify, research and encourage better waste management options.
- To encourage the adoption of a Zero Waste mandate for New Zealand.

The Clean Up New Zealand Trust works in partnership with local councils, schools, the Ministry for the Environment and sponsors. Corporate sponsors, who include McDonalds, The Warehouse, DDB Advertising and TV3, provide Clean Up NZ with funding and an opportunity to operate at a level unattainable without that support (About Clean Up NZ, 2003).

The organisation focuses more on facilitating community groups with pro-environmental behaviours rather than creating and managing projects themselves. To do this, Clean Up NZ provides groups with a booklet that tells them all they need to know to stage a clean up or other activity. They also provide groups with ideas of pro-environmental activities they could adopt and information on how to obtain funding and work with the media to promote the event.

While the Clean Up NZ campaign targets a number of demographic groups, a strong emphasis is placed on teaching solutions to current environmental problems to 5–15 year olds, with the primary focus on waste reduction. This component of the campaign is supported by the Ministry for the Environment, who provide funding for the 'Reduce Your Rubbish' campaign. This is built on the premise that, while people want to participate in pro-environmental behaviours, education is

lacking and people do not understand how their actions relate to the growing waste problem. The campaign is therefore wide ranging for, example, in the Manawatu/Wanganui Regional Council area there were approximately 80 events held to coincide with Clean Up NZ in 2003. These ranged from school waste reductions to businesses collecting litter in and around their premises.

### **1.3.3 Shared elements between the two campaigns**

The current research, through its assessment of both campaigns, examines the role of mass communication in interpersonal family communication. That is, the study explores messages disseminated through the mass media, how these messages affect communication among the family members, and what behaviour changes result as a consequence of that communication. If communication campaign designers would like their messages to be effective, the mass and interpersonal communication elements should be considered as part of the same process rather than two separate entities. Both campaigns considered here communicate their messages in a method that may encourage people to enter into conversations within their family that, in turn, could affect behaviour patterns.

The objective for both Clean Up NZ and the BCU is the same, to protect the environment. While the campaigns are completely independent, there are a number of common strategies and tactics which are employed. The designers of both campaigns have constructed a comprehensive communication strategy that includes communication activities targeting a number of different groups across a broad range of demographics. Both have a curriculum programme targeted toward school-age children and communication targeting older demographic groups, for example, Rotary, sporting clubs, workplaces and family homes are encouraged to participate.

This current study concentrates on one particular flow of communication from each campaign, as shown in Table 1. The decision to look at the upward and downward flow of communication from two different campaigns, instead of from one single campaign, was for two reasons. First, to ensure any fundamental flaws in the campaign design, rationale or execution would not jeopardise the findings in this study. Second, a relationship between the researcher and campaign designers at the Auckland Regional Council made access to sample groups and organisational background information, an appealing prospect.

**Table 1. Characteristics of Campaigns**

<b>Campaign</b>	<b>Direction of communication flow</b>	<b>Channel</b>
Big Clean Up	Downward – parent to child	Mixed media <ul style="list-style-type: none"> <li>• Direct marketing – mail, resource kits</li> <li>• Advertising – TV, radio and print</li> </ul>
Clean Up NZ	Upward – child to parent	School curriculum

#### **1.3.4 The use of McDevitt and Chaffee’s model**

The study uses the five-stage model developed by McDevitt and Chaffee (2002) to examine the flow of family communication from messages of a pro-environmental communication campaign. This model is considered as highly relevant to a study of this nature for two reasons. First, it represents a new way of seeing issues surrounding information flows in families and among their members. Second, although the model refers to political socialisation and behaviour, this area is sufficiently close to pro-environmental behaviours as to suggest it is potentially suited for replication in this study. That is, both political activation and pro-environmental behaviours are altruistic in nature and there is a potential wider community gain as a result of the actions. McDevitt and Chaffee’s (2002) study examined communication interventions, such as a media campaign or school curriculum, and how these interventions can heighten the interest of the family

member initially reached by the intervention. McDevitt and Chaffee state that any change in a family member's position on an issue will create tension if other members of the family perceive a need to increase their civic competence. They (2002) propose a five-stage sequence that conceptualises a process of activation within a family. It begins with one of the members being subject to an intervention, then acting as a catalyst for change within the family, and ends with family members engaging in wider civic participation (these steps are discussed in more detail in Chapter 2).

McDevitt and Chaffee's (2002) five-step process of activation was also selected for this study because it provides insight into family communication responses and behaviours from a mass-communicated intervention. Most research into communication within families has been associated with Newcomb's (1953) A-B-X model and socio/concept orientation (Burrell & Fitzpatrick, 1990; Fitzpatrick, 1990; Fitzpatrick & Ritchie, 1994; Tims & Masland, 1985) or derivative studies. While this work helps identify patterns of communication in a family, McDevitt and Chaffee's (2002) work permits a more in-depth analysis of factors associated with campaign effects. The functional model they have designed measures campaign effects within a social context and highlights connections among communication events. In doing so the model has the potential to shed more light on the issue of interest to the present study, in particular processes within the A-B-X formula.

McDevitt and Chaffee have devised a new way for communication researchers to examine the relationship between family communication and the extent to which these discussions, if at all, affect the behaviours of the family members. Investigation of communication research literature, from 2002 to the present, does not show any replication or extension of the McDevitt and Chaffee model. The current research seeks to test the model in the context of family communication and define any relationships that communication may appear to have with pro-environmental behaviours.

Although the present study uses the McDevitt and Chaffee model, the behavioural outcomes explored here through the intervention in this research were pro-environmental in character as opposed to political positioning in the original study. In such a framework McDevitt and Chaffee believe the family is a “mediating institution in relationship to societal agents” (p. 7). The family, they say, is responsive to stimulation originating from media, schools and planned communication campaigns. The family can provide communicators with an opportunity to effectively change the behaviours or practices of a number of people at one time. Therefore, the family renders itself as an important communicative focus, which suggests further research would be beneficial in providing an understanding of how family communication about campaign messages can affect behaviours.

A particular goal of this study was to detail the communication and the behaviours that transpired as a result of interpersonal interaction. The main area of interest was the flow of communication in relation to the BCU and Clean Up NZ campaigns. To examine the communication/behaviour relationship, a questionnaire was developed based on the themes from McDevitt and Chaffee (2002) which contained the following five themes:

**Theme 1: Individual response:** behaviours and communication surrounding political issues, how the intervention came to be and behavioural effects of the intervention. An individual’s response to an intervention includes heightened civic involvement as manifest in increased interest and information seeking.

**Theme 2: Interpersonal communication:** the acquisition of knowledge and how/if this new information is transferred through other family members. The resulting knowledge acquisition and opinion formation motivates interpersonal communication about politics in the family.

**Theme 3: Expectations for civic competence:** any changes in thinking and/or behaviours within family members and any shift in family culture as a direct consequence of the intervention. This prompting increased expectations for political competence among other family members.

**Theme 4: Reciprocal influence:** changes in the behaviours of family members if communication has led to a greater understanding. As family members collectively achieve higher levels of competence, they acquire an increased capacity for reciprocal influence that helps to sustain their interest in civic affairs.

**Theme 5: Civic participation:** increased motivation for civic participation outside the house, such as new behaviours and instances of causes to intervene in actions in external environs.

These themes comprise the basis of this research. The five-stage sequence of the family activation model will be applied to both the Big Clean Up and Clean Up NZ as individual campaigns, which will then be compared with each other for full analysis and interpretation.

#### **1.4 Overview of the thesis**

This study examines how messages from a communication campaign enter family interactions, and how those conversations affect the future behaviour of family members. More specifically, the research explores when a communication intervention occurs and, once information is introduced to other family members, how the interpersonal balance within the family is either re-harmonised or a new expectation of behaviour is established within the family culture. This study aims to develop an understanding of the role of family communication and how that family

communication relates to behavioural change in the face of messages from an outside source.

This thesis is structured into six chapters. Chapter 1 has established an overview and a statement of the objectives of the research project, together with the background information on the campaigns that are investigated: the BCU and Clean Up NZ. Chapter 2 presents a review of the literature relevant to communication campaigns and family communication patterns. It begins with an overview of mass and interpersonal communication, and then considers communication campaign theory and research, especially research involving pro-environmental behaviours. It concludes with literature about the knowledge-behaviour gap in relation to public communication campaigns.

Methodology and research design issues are detailed in Chapter 3. In addition, because researcher observations were used as part of the methodology, ethical issues are discussed here. Chapter 4 summarises the results of the interviews conducted with the parents and children of seven families, or 20 individuals, who in some way participated in either the BCU or Clean Up NZ programmes. The reported behaviours of the families both before and after the communication interventions are also observed.

Chapter 5 presents the analysis of how the two campaigns influenced family communication about environmental issues. It examines in particular the role of upward and downward communication. There is also consideration of the model developed by McDevitt and Chaffee (2002) and its relevance in measuring family communication about pro-environmental messages. McDevitt and Chaffee have utilised the model to analyse political socialisation and communication within families and any effect of the communication on behaviour.

## **Chapter 2: Literature Review**

## **2.1 Introduction**

This current study is based around the examination of two functions within a process: how messages from a communication campaign sent by a public organisation intervene in a family's communication process, and how these in turn affect the behaviours of those reached through that intervention. This study aims to develop the understanding of the role of family communication and how that relates to behavioural change when faced with messages from an outside source.

The literature reviewed in this section examines controlled forms of communication; in particular the flow of communication from communication campaigns that are commissioned by public organisations. It will also consider the limited evidence available on how the messages sent through the Public Communication Campaigns (PCC) affect the communication process within families.

Communication theorists such as Rice and Atkin (2001), Chaffee (1986), and Valente, Poppe and Merritt (1996) argue there is little similarity between the methods with which researchers have approached interpersonal communication as opposed to mass communication processes and effects. There is empirical evidence from media campaign research that suggests communication campaigns generate interpersonal communication about a topic (for example, Valente, Kim, Lettenmaier, Glass, & Dibba, 1994; Vaughan, Swalehe, & Rogers, 1995). Few studies, however, have measured whether interpersonal communication was generated specifically by the campaign, and if communication did occur, who the discussions were between. Indeed, there has been a lack of cross-fertilization between mass media and interpersonal communication research (Barnett & Danowski, 1992; Chaffee, 1982; Hawkins, Wiemann, & Pingree, 1988; Reardon & Rogers, 1988; Rice, Borgman, & Reeves, 1988; Valente, Poppe & Merritt, 1996).

## **2.2 Mass communication: a campaign overview**

Mass communication cannot be defined as any single entity but rather as a meeting place of a number of communication practices. For message senders there is often an expectation that mass communication campaign messages will have a direct relationship on the behaviour of the message receiver; a relationship that confronts campaign designers with many difficulties. Early theorists believed that simply communicating to a mass audience would condition message receivers to the content of the message. Evidence of this thinking is highlighted by the development of such theories as the 'magic bullet theory' and the 'hypodermic needle theory' (Baran & Davis, 1995). The assumption that a powerless public would transform its thoughts and actions through a mass communicated message was, at best, ambitious, although some practitioners still persist with this attitude and hold onto expectations of immediate and direct effects (Windahl, Signitzer & Olson, 1995).

The ability of organisations to communicate with a population to bring about a desired change is a complicated brief and contains many facets. Failure to communicate the messages of an organisation effectively may see its perceived usefulness compromised. The direct effect of a private organisation's campaign success or failure can be more easily seen through the 'investment/return' relationship. For example, if a business employs a mass media campaign to promote a special deal on a product, its decision can be assessed by how many products are sold as a result of the communication. Public organisations have more complex and more non-tangible factors that would demonstrate a campaign's success. For example, a health group that communicates messages encouraging people to stop smoking may see a drop in the number of people who smoke. While the health group is encouraging people to stop smoking based on reasons of health, a person may actually give up for non-health related reasons, such as an increase in the price of cigarettes. Therefore the campaign may have had no effect on the decision to cease smoking.

PCCs are purposive attempts to inform, persuade, or motivate behaviour changes in a relatively well-defined and large audience, generally for non-commercial benefits to the individual and/or society. Rice and Atkin (2001) state “they are typically conducted within a given time period, by means of organised communication activities involving mass media and often complemented by interpersonal support” (p. 232).

Some writers suggest that public-orientated campaigning has emerged from the rise in social marketing (Kotler, 1972; Solomon, 1989). However, history suggests strategically developed communication dissemination was happening much earlier than this, such as at the time of the American Civil War. Even as early as the 1700s individuals or organisations were disseminating messages strategically through use of the printing press or from the church pulpit (Rice & Atkin, 2001). The issues covered tended to be based on public morality. The formal introduction of social marketing began with the question: “why can’t one sell brotherhood and rational thinking like you can sell soap?” (Wiebe, 1952). Here, Wiebe is asking if the principles that are used to sell products can be applied to the marketing of ideas, especially those ideas that would benefit the wider community. Kotler and Roberto (1989) suggested that social marketing is a viable vehicle for the development and communication of strategies related to social behaviour change. They define social marketing as “a programme planning process that promotes the voluntary behaviour of target audiences by offering benefits that they want, reducing barriers they are concerned about, and using persuasion to motivate their participation in the programme activity” (p. 24).

Communication campaigns have been described as an essential part of modern culture (Rice & Atkin, 2001). Communicating messages to a large number of people, to change a behaviour or attitude, is for most organisations a task that is necessary and desired to achieve their goals. Types of campaigns have developed and diversified in recent years to include such areas as issues surrounding women,

sexual behaviour and environmental awareness (Rice & Atkin, 2001). Campaigns that provide a New Zealand context include the dangers of and attempted ban on genetically modified foods and the necessity to inform Maori about the Maori Enrolment Option.

It cannot be assumed that knowledge is all that is needed for someone to change their behaviour. If campaign designers expect people to alter their current behaviours based on campaign directives, then the communicator must develop messages to which people can give genuine attention (Watson, 2003). Generally, researchers argue that mass media campaigns will have no significant success in changing attitudes and behaviours (Rice & Atkin, 2001; Courtney-Hall & Rogers, 2002). While it is accepted that knowledge may increase, there is no necessary direct correlation to changes in behaviour. Recent evaluations of campaigns relating to health behaviour indicated that media might help in creating awareness of an issue. However, any change in behaviour patterns was attributed to interpersonal communication (Flay & Burton, 1990; Rogers & Storey, 1987). Media messages are often assumed to have more effect on others than the self, a phenomenon known as 'third-person effect' (Lasorsa, 1992; Perloff, 1993; Salwen & Dupagne, 1999). The third-person effect states that "people will tend to overestimate the influence that mass communications have on the attitudes and behaviors of others" (Davison, 1983, p. 3). A practical way of looking at third-person effect is that messages "have little effect on people like you and me, but the ordinary reader is likely to be influenced a lot" (Davison, 1983, p. 2).

Klapper (1960) stated that the most likely result of a campaign would be a reinforcement of current attitudes because of the three processes operating (p. 19–25):

1. Selective exposure – people will expose themselves to messages to which they already agree.

2. Selective perception – even if individuals are exposed to counter-attitudinal messages they will distort the message in such a way for it to support their beliefs.
3. Selective retention – individuals will remember information that supports their current beliefs.

However, there is limited empirical evidence to support the claim that these processes will affect the outcome of a campaign's objective. That is, a campaign is unlikely to be generally unsuccessful in changing attitudes or behaviour.

Milburn (1979) made three main observations on campaigns:

1. Evidence from short-term media campaigns does not address the question of the effectiveness of mass media campaigns. Simply because selective processes may operate in the short term does not mean they cannot be overcome in the long term.
2. Campaigns which focus upon changing attitudes rather than on increasing knowledge and changing the specific attitudes related to important behaviours are not likely to be successful.
3. Because some campaigns have been unsuccessful does not mean that all campaigns must be unsuccessful. Evidence from mass media campaigns which finds no effect on attitudes and behaviour supports the conclusion that it is possible to conduct an unsuccessful campaign and still find limited support for selective process. Mass media interventions that fail to change the targeted attitudes and behaviour are always open to the criticism that they were not conducted well enough (p. 504).

McKenzie-Mohr (2000) also argued that information campaigns used to foster behaviour change have little impact. He stated that information-intensive campaigns should focus on one of two perspectives of behaviour change. With the first, programme planners assume that by enhancing knowledge of an issue, such

as global warming, and encouraging the development of attitudes that are supportive of an activity, such as using mass transport, behaviour will change. A number of studies contradict this thinking:

- Householders who were interested in enhancing the energy efficiency of their homes participated in a comprehensive workshop on residential energy conservation. Despite significant changes in knowledge and attitudes, behaviour did not change (Geller, 1981).
- Householders who volunteered to participate in a 10-week study of water conservation received a booklet that described the relationship between water and energy use, and methods were described that could conserve water. Even though great attention was given to preparing the booklet, it had no impact on water consumption (Geller, Erickson & Buttram, 1983).
- When 500 people were interviewed regarding their personal responsibility for picking up litter, 94% acknowledged responsibility. However, when leaving the interview only 2% picked up the litter that had been 'planted' by the researcher (Bickman, 1972).

McKenzie-Mohr's second perspective suggested that behaviour is strongly influenced by economic motives (p. 545). Here he stated that people will act pro-environmentally when there is a direct economic benefit to them. For example, the use of compact fluorescent light bulbs and thermo blankets for water heating cylinders may be motivated by the desire to reduce electricity costs and not for any pro-environmental reason.

### **2.2.1 Mass media's effect on interpersonal communication**

Mass media campaigns (Atkin & Arkin, 1990; Rice & Atkin, 1994; Rogers & Storey, 1987; Salmon, 1989) and information, education, and communication activities are created to promote specific practices and improve individuals' well-being. One

consistent finding from media campaign research is that campaigns often generate interpersonal communication about a topic (e.g., Valente, Kim, Lettenmaier, Glass, & Dibba, 1994). Few studies, however, have measured whether the interpersonal communication was generated especially by the campaign or the persons with whom the communication occurred. There has been a lack of cross-fertilisation between mass media and interpersonal communication research (Chaffee, 1982; Rice, Borgman, & Reeves, 1988).

Diffusion-of-innovation studies have taken account of the different roles of the mass media and interpersonal communication (Valente, 1993). Ryan and Gross (1943), Rogers, (1995), and Valente and Rogers (1995) considered both processes in their original formulation of the diffusion-of-innovations model. The diffusion model, and many other behaviour-change models, often assume that the mass media inform individuals about ideas and set agendas for discussion. Interpersonal communication, in contrast, is more effective at getting individuals to try out and eventually adopt new behaviours (Rogers, 1995). According to the diffusion-of-innovations model, the mass media are effective in bringing about awareness of innovations, but interpersonal communication is effective in bringing about adoption. Diffusion theorists have created network models of diffusion that account both implicitly and explicitly for the distinct roles of mass and interpersonal communication (Valente, 1995).

### **2.3 Communication models and campaign theory**

How then do communicators, particularly those working with limited resources, usually those in public organisations, determine what is the best way to compile a successful campaign? When Harold Mendelsohn (1973) wrote his influential article, "Some Reasons Why Communication Campaigns Can Succeed", he stated that although the mass media messages, by themselves, may be relatively powerless to bring about consequential attitude change, social science research

can render them more effective by determining appropriate targets, themes, appeals and media vehicles.

The way information flows between the communicator and the receiver(s) has been documented in theory and practice for most forms of communication, including PCCs (Rice & Atkin, 2001). Public relations practitioners and public communications campaigners can learn much from each other, claimed Dozier, Grunig and Grunig (2001). Researchers have presented a number of communication models, such as the press agency model (Goldman, 1948) and two-way symmetrical/asymmetrical public relations models (Grunig & Hunt, 1984), which can assist the strategic programme developer in creating successful PCCs.

If, then, PCCs are an essential part of modern life, as claimed by Rice and Atkin (2001), and communicators intend to continue with this form of communication practice, then the question needs to be asked: how can communicators implement successful PCC? Mendelsohn (1973) investigated successful PCCs and found these common factors:

1. Campaign developers assume that most audiences are likely to be only mildly interested in the message,
2. Middle-range goals are set (for example, developers feel confident that simple message exposure will lead to desired information gain or change in behaviour), and
3. The target audience is thoroughly investigated in terms of demographics, lifestyles, values and mass media habits (p. 52).

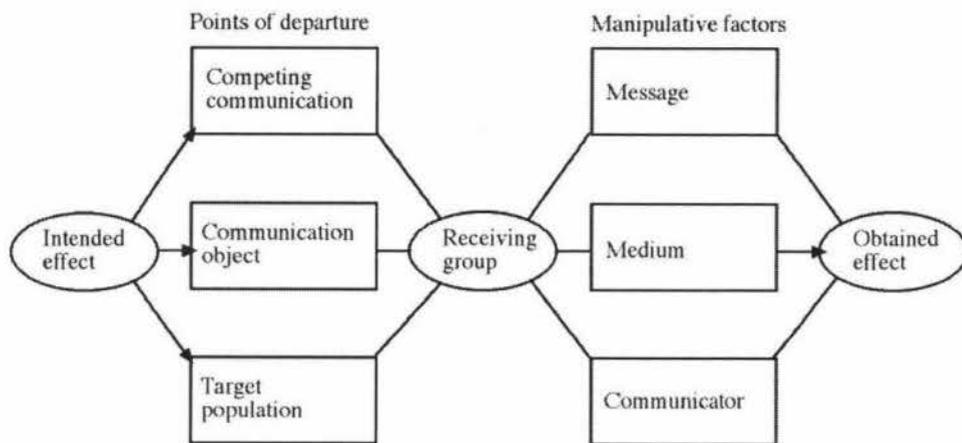
Grunig (1983) argued that even simple, practical goals are doomed to fail. He offered research suggesting that communication is rarely enough to change attitudes and behaviour. Mass communication theorists have identified up to 32 different aspects of communication, of which attitude and behaviour are only two

(Grunig & Hunt, 1984). Grunig (1983) provided five PR objectives he believed are the most relevant for planning and evaluating public relations programmes:

1. *Communication alone*. The target public receives a message. Stories are placed in the media and the public read them; the public see an advertisement, attend a special event, read a brochure; management meets with public leaders, reads the results of a public opinion poll.
2. *Retention of messages*. Recipients of the message comprehend it. They do not necessarily agree with the message or plan to do anything about it. They simply remember what has been said.
3. *Acceptance of cognitions*. The target not only retains a message explaining the organisation's beliefs about reality but retains the message as its own belief.
4. *Formation of change of attitude*. The target not only believes the message but also evaluates its implications favourably.
5. *Behaviour*. Targets actually change or begin a behaviour. They may write to a government official, avoid a product, buy a product, attend an event or give money to a cause.

Grunig continued that the objectives of a given campaign would depend on the nature of the public at whom the programme is targeted. The more active the public, the more likely that objectives will be 3, 4 and 5. However, the research conducted by Grunig (1983) showed that the probability of achieving each of these effects on any public drops rapidly as you move down the list.

Nowak and Wårneryd (1985) provided a model for communication campaigns, shown in Figure 1. This model, as described by McQuail and Windahl (1993), gives a description of the typical work process in campaigning.



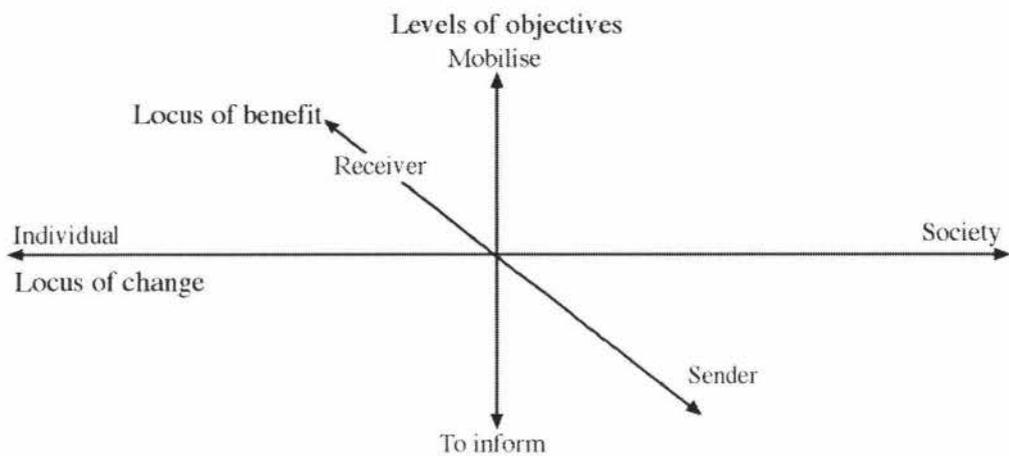
**Figure 1.** A model of a communication campaign (Nowak and Wärmeryd, 1985, p. 185)

According to McQuail and Windahl (1993), the purpose of the campaign is important in achieving the desired effect. They stated that the elements in the model are interrelated, that is, if the aim is changed this will affect the other elements of the model. They further suggested that the better and more precisely the aim is stated, the fewer options the campaigner has in defining other elements. Any changes to the aims during a campaign period are regarded as normal procedure. An example of this is when it becomes obvious that a message or channel is not performing as initially expected.

McQuail (1994) claimed the entire study of mass communication is based on the premise that the media has significant effects, although agreement is still to be reached on the nature and degree of these assumed effects. Studies of media effect have shown that receivers of planned communication have their primary effect in information, then attitudes and later, sometimes never, in behaviour (Hovland, Lumsdaine, & Sheffield, 1949). When an organisation develops a PCC, a large amount of research into persuasion, relating to attitude change and corresponding behaviour change, may be neglected. Pro-environment communication campaigns face a special problem, as the messages attempt to direct a behaviour that does not occur until later (Bator & Cialdini, 2000).

## 2.4 Message effect

Rogers and Storey (1987) developed a model to highlight the dimensions of difference relating to objectives and effects of a communication campaign. Figure 2 shows the intersection of three dimensions, one relating to the aims, another to the location of the intended change and a third to the balance between benefit for sender or receiver.



**Figure 2.** Dimensions of campaign objectives and effect (Rogers & Storey, 1987)

McQuail and Windahl (1993, p.188) described this breakdown in more detail:

**Level of objectives:** The different purposes of a campaign can be ordered hierarchically or sequentially. Alternatively, they may be ordered in accordance with the stages of innovation-diffusion process.

**Locus of change:** Usually the effects of communication campaigns can be found on several levels: individual, group and societal, at the same time. The communicator may also try to effect change on individuals through changes at a group level.

**Locus of benefit:** Most campaigns are potentially beneficial to more than one of the parties involved (senders, receivers, a third party).

The 'third-person effect' hypothesis describes how individuals tend to think that the media will have a greater impact on others than themselves (Davison, 1983; Tyler & Cook 1984; Cohen, Mutz, Price & Gunther 1988). Whether or not the individual receivers of messages were part of the intended audience is inconsequential as they may alter their behaviour on the expectation they believe the messages will have on other people. Any effect that the communication achieves may be due not to the reaction of the ostensible audience but rather to the behaviour of those who anticipate, or think they perceive, some reaction on the part of others (Davidson, 1983, p. 3).

## **2.5 Communication within families**

Family communication plays an important role in the stability, maintenance and change that occurs in close relationships, as well as a central role in the socialisation of children (Coontz, 2003). As a result, analysing communication among family members may reveal vital principles of interpersonal communication. The family has long been considered the basic unit in society, and studies in mass and interpersonal communication show evidence that family communication interactions have a significant influence on members' cognitive and behavioural actions (Newcomb, 1953; Fitzpatrick & Ritchie, 1994).

In their study on the influence of family communication on the attitudes and actions of college-aged children about sexuality and alcohol use, Booth–Butherfield and Sidelinger (1998) indicated that parents continue to have a significant influence on their children, even into late adolescence. Parents affect their children, especially in the behaviour areas of alcohol usage, cigarette smoking, and sexual values. Family communication and interaction patterns appear to mediate these behavioural outcomes. One may assume that the parental influence may also affect other areas of behaviour, such as pro-environmental behaviours.

Fitzpatrick and Wamboldt (1990) and Turner and West (1996) advocated a multiple-perspective approach to family communication. To understand family communication patterns, one needs to examine the perceived realities of multiple members. Perspectives of children may not entirely match those of their parents regarding familial interaction – especially as they balance independence needs with ties to family values. During a child's transition from adolescence to young adulthood, the parent and child often renegotiate the boundaries of their relationship and establish new rules regarding privacy and communication (Guerrero & Afifi, 1995).

Family communication environments can be gauged by the extent to which the children are encouraged to develop and express opinions and ideas, searching out solutions and philosophies of their own (Ritchie & Fitzpatrick, 1990; Turner & West, 1996). Hence, interactional patterns in the family shape both the relationships within the family, and serve as mediators influencing children's attitudes and subsequent behaviours.

The original conceptualisation of the Family Communication Process (FCP) was much influenced by Newcomb's (1953) A-B-X model. The A-B-X model treats interpersonal interaction as a series of communication acts between two people: "... in the simplest possible communicative act one person (A) transmits information to another person (B) about something (X)" (p. 393). The attitudes of A and B toward each other and the topics they discuss are important components of the A-B-X model. In imbalanced situations, for example, when A and B like each other, and A has a positive attitude toward X but B has a negative attitude toward X, A and B experience 'strain toward symmetry', or pressures toward agreement, that motivate them to communicate. Then when A and B communicate, according to the A-B-X model, they exchange information that enables A and B to inform themselves about, or even influence, each other's attitudes (p. 395).

Family members have internal working models of family communication and relationships (Fitzpatrick & Ritchie, 1994). These internal models, or family communication schemata, are knowledge structures that represent the external world of the family and provide a basis for interpreting what other family members say and do, as well as messages about the family (Burrell & Fitzpatrick, 1990; Fitzpatrick, 1990). Individuals in the family encode and process messages from family members and about the family in terms of these schemata.

McLeod and Chaffee's (1972) work recognised that family communication styles could be classified by the idea of A-B relations, defined as 'socio' and A-X relations, defined as 'concept', which creates the foundation of the four-fold family communication typology, as shown in Table 2. Tims and Masland (1985) described the breakdown as:

Families high on concept dimension and low on the socio dimension (relative A-X emphasis) were defined as pluralists. Families high on socio dimension and low on the concept dimension (relative A-B emphasis) were defined as protectives. Families high on both dimensions (A-X and A-B emphasis) were defined as consensuals. And finally, families low on both dimensions were defined as laissez-faire (p. 37).

The characteristics of these families can be seen in Table 2, as shown in Fitzpatrick and Ritchie (1994, p. 280).

**Table 2: Characteristics of Family Types**

High Conversation Orientation		Low Conversation Orientation	
<u>Low Conformity</u>	<u>High Conformity</u>	<u>Low Conformity</u>	<u>High Conformity</u>
Pluralistic Families	Consensual Families	Laissez-Faire Families	Protective Families
Open communication and discussion of ideas is encouraged but with little emphasis on social constraint	Strong pressure toward agreement	Little parent-child interaction	Obedience is prized
Fosters communication competence as well as independence of ideas	Child encouraged to take interest in ideas without disturbing power in family hierarchy	Child relatively more influenced by external social settings (e.g. peer groups)	Little concern with conceptual matters
	Child may adopt parents' views or may escape from parent-child interaction into fantasy		Child is not well-prepared for dealing with outside influences and is easily influenced and persuaded

Family systems can be characterised by stable sets of expectations, beliefs, and norms about their family life, variously referenced as "world views" (Hess & Handel, 1959, p. 14), "family paradigms" (Reiss, 1981, p. 2), or "schemata" (Fitzpatrick & Ritchie, 1994). These provide working models for family members, providing them with normative guidelines for how to behave toward one another and how to interpret one another's actions. Families have working models of how parents and children interact, organized around the core themes of control and support (Fitzpatrick & Ritchie, 1994). McDevitt and Chaffee (2002) quoted other research (Chaffee, McLeod & Wackman, 1973), along with their own findings, that "a dismissal of the family as an inherently non-political institution" (p. 8) exists despite evidence demonstrating the family's importance in the political socialisation of children and parents and the setting it provides for news media use.

McDevitt and Chaffee explained the way communication affects the attitudes and/or behaviour within a family. Families are made up from social systems where norms and routine behaviours establish homeostatic balance in a number of

communicative ways (in the case of McDevitt and Chaffee, politics). However, because the interactions among family members are dynamic, over time external factors will require the family to regulate its relationships in reply to changes. The way a family responds to an intervention is almost always social. While individual members of a family may instigate discussions on a subject and continue to acquire relevant information, the family tends to respond as a unit towards the greater amount of communication about the intervention.

McLeod and Chaffee (1972) developed the model of the family as a communication environment and they created the Family Communication Patterns (FCP) instrument. This has been widely used by communication researchers to measure family communication norms and is regarded as a predictive tool for a variety of behaviours and outcomes (Ritchie & Fitzpatrick, 1990). Ritchie and Fitzpatrick (1990) believe that the measurement of FCP deserves closer scrutiny. Family environments have been divided into two categories: (1) whether the child is encouraged to express autonomous opinions and ideas (concept-orientation) and (2) whether the child pursues relational objectives by conforming to parental authority (socio-orientation).

McDevitt & Chaffee (2002) have produced a five-stage sequence, based on empirical evidence that supports the conceptualisation of a process of family activation. The activation process is where a person introduces new information, which may be either consistent or conflict with current beliefs, into a family setting. These steps are:

- Step 1: An individual's response to an intervention includes heightened civic involvement as manifest in increased interest and information seeking.
- Step 2: The resulting knowledge acquisition and opinion formation motivates interpersonal communication about politics in the family.

- Step 3: This prompts increased expectations for political competence among other family members.
- Step 4: As family members achieve compatibility at higher levels of competence, they acquire an increased capacity for reciprocal influence that helps to sustain interest in civic affairs.
- Step 5: Increased motivation for civic participation outside the house.

It is interesting to note that a level of interest in public affairs may increase the level of communication an individual brings into the family home. However, this is found not to be the case where the communication is not in harmony with the views of others in the household. This situation is found particularly in lower socio-economic homes where, it is argued, political issues and controversies are rarely discussed (Ettema & Kline, 1977). A disruption to the structure of the family's social interaction, from external stimuli, will see efforts by the members to restore the balance. McDevitt and Chaffee (2002) claim that this adjustment process can be stated as the dynamic that may see growth and change within the family unit.

While interventions designed to cultivate citizenship have tended to focus on individuals rather than family units (McDevitt & Chaffee, 1998), findings in health communication have highlighted the effectiveness of targeting families as opposed to single family members. Rimal and Flora (1998) reported that a campaign directed at the dietary behaviour of households modified not only the eating habits of the parents and children but the impact the two had on each other. While the campaign provided a degree of independent influence on the two parties, it also strengthened the capacity of the children and parents to influence each other's health behaviour.

McDevitt and Chaffee (2002) claimed that the political involvement of spouses supports the contention that family interaction is characterised by mutual adjustments and that changes in the political interest of one member have consequences for the other family members. They drew on the work of Jennings

and Niemi (1971), who documented a strong pattern of uniformity among eleven indicators of husband-wife politicisation. Among the criterion measures and correlations were knowledge, reading newspapers, watching television, and participation in community affairs. McDevitt and Chaffee suggested that because it is relatively easy for family members to exert influence over one another's behaviour, the family then acts as a device for political activation. It only takes one member of the family to start a flow of behavioural changes through an initial intervention. It does not need all members of the family to be exposed to the intervention at one time; the stimulation of one member can result in the politicisation of family as a social system. They acknowledged that the implications of family influence extend beyond the recruitment of individuals for the participation in a political system. By acquiring discursive habits at home, such as reciprocity, tolerance for diverse views, turn taking in conversations and daily discussions about the news, parents and children prepare themselves for participation in a civil society.

Children have demonstrated the ability to initiate change in family communication and behavioural practices (McDevitt & Chaffee, 2002). Once an adolescent has shown an interest in discussing an issue a parent's interest can also be stimulated to engage in informed discussion in the processes that occur before, during and after the conversation, see Table 3. During each time period the process may take the form of behavioural, cognitive or affective activity. Before the next conversation, a parent might read a newspaper more often, or pay more attention to the evening news in preparation for future encounters (Kanihan & Chaffee, 1996). From a cognitive perspective, increased use of news media could be accompanied by "active reflection" on the campaign messages or discussion content (Horowitz, 2001). Anticipation of conversations could be accompanied also by some excitement as an affective response, along with greater emotional investment in the processing of messages.

During a conversation, the parent has a chance to practice their civic competence in behaviours such as expression of opinions, demonstration of knowledge, and attentive listening to a child's views. The parents' self-assessment of their conversational performance, and the child's feedback, could then result in a cognitive response in which the parent makes further efforts toward opinion crystallisation (McDevitt & Chaffee, 2002, p. 288).

After a conversation, the cognitive implications could include the parent's realisation that the rearing of children should include preparation for citizenship. If the parental norm becomes increasingly salient, the behavioural response could include the encouragement of children to read more about the issue. Parents will make media more available to the child and take more pride in the development of their child's development.

**Table 3: Mechanisms of parental growth: before, during and after discussion with child**

Temporal stage	Conduit for parental growth	Activities
Before the parent-child discussion	Preparation for the next conversation	<p><i>Behavioural:</i> information seeking via news media use</p> <p><i>Cognitive:</i> contemplation that leads to opinion development</p> <p><i>Affective:</i> anticipation of next conversation; increased emotional investment in news processing</p>
During discussion	Heightened involvement in conversation	<p><i>Behavioural:</i> increased effort in listening and articulation of views</p> <p><i>Cognitive:</i> evaluation of opinions giving usefulness in</p>

		discussions, further crystallisation
		<i>Affective:</i> anger if disagreement or pleasure in response to a stimulating exchange of ideas
Following discussion	Increased salience of parental responsibility in civic training	<p><i>Behavioural:</i> encouragement of child toward further growth (e.g., making newspapers available in home)</p> <p><i>Cognitive:</i> realisation that parenting should include preparation of children for citizenship</p> <p><i>Affective:</i> guilt or satisfaction depending on conversational competence; pride in child's growth</p>

McDevitt and Chaffee (2002) p. 289.

## 2.6 Family rituals and communication

Ballantyne, Fien and Packer (2001) showed that the power of communication can change the behaviour of individuals through family communication. In their research into student and parent interaction they found that 73 per cent had discussed what they had learnt at least once with their parents and most cases more than one discussion occurred. Parents also admitted that these discussions had challenged their perceptions of household practices.

Similarly, Ballantyne, Connell and Fien (1998) stated that children are likely to initiate meaningful and relevant discussions with their parents after the children have been exposed to some form of pro-environmental message. Even young

children can influence everyday household activities such as walking or riding to school, taking shorter showers, turning off taps and lights and buying environmentally friendly cleaning products.

Rituals hold particular significance to the well being of the family system. Scholars have argued that family rituals strengthen and maintain attachment and bonding among family members, produce and reproduce a family's culture or sense of its identity, and socialise family members in how to conduct social relations (Cheal, 1988; Imber-Black, Roberts, & Whiting, 1988; Reiss, 1981; Wolin & Bennett, 1984; Zeitlin, Kotkin, & Baker, 1982). Despite the apparent importance of family rituals, we have only limited insight into how different family systems conduct ritualised life. Among family scholars, the "ritual" concept refers to a distinctive form of social activity. Bossard and Boll (1950) defined a ritual as family interaction that is localised around family living and characterised by prescription, recurrence, and a "sense of rightness which emerges from the past history of the process" (p. 16). In perhaps the most influential work on family rituals, Wolin and Bennett (1984) defined the concept as a symbolic form of communication that is enacted systematically and repeatedly over time and which holds special meaning for family members. Cheal (1988) similarly defined the family ritual as a repetitive, stylised act that is directed toward people or things that are highly valued by the family.

## **2.7 Pro-environmental messages: relationships with attitude and behaviour change**

The question as to why people act in a pro-environmental way, which can best be described as behaviour that consciously seeks to minimise the negative impact of one's actions on the natural and built world, has been one psychologists and sociologists have tackled over the past 30 years (Kollmuss & Agyeman, 2002). The belief that educating people by changing their attitudes and providing them with the information is an effective way to change their behaviour, is argued to be a myth

(Gardner & Stern, 1996). Behavioural and social science research has shown this assumption to be over simplified and misleading.

The implications that affect communicators when promoting a cause are consistent across industries and disciplines. This is to suggest that the discrepancy between knowledge and action does not begin and end with environmental issues. For example, even people who know it is bad for their health to smoke cigarettes may continue to do so.

Early models of pro-environmental behaviour are based on the simple sequence of environmental knowledge → environmental awareness and concern (attitudes) → pro-environmental behaviours. This theory was quickly proved to be flawed as studies showed that knowledge and awareness did not lead to pro-environmental behaviours (Owens, 2000). However, there are claims (Kollmuss & Agyman, 2002; Owens, 2000), that most environmental organisations still based their communication campaigns on the assumption that increased knowledge would lead to behaviour changes in an individual. The reliance on information to change behaviour is surprising, as anyone who has tried to change an action knows how difficult it is, even if this change is an improvement on the status quo. Gardner and Stern (1996) stated that even in the presence of favourable attitudes, knowledge does not lead directly to pro-environmental behaviour.

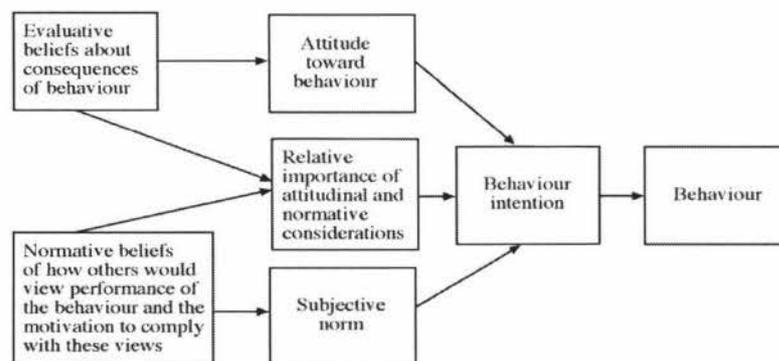
Researchers have tried to explain the discrepancy between what people say and what they actually do. Rajecki (1982) defined four possible reasons for this:

1. *Direct vs indirect experience*: Direct experiences have a stronger influence on people's behaviour than indirect experiences. In other words, indirect experiences, such as learning about an environmental problem in school as opposed to directly experiencing it (e.g., seeing fish in a river that have been killed by pollution) tend to lead to a weaker correlation between attitude and behaviour.

2. *Normative influence*: Social norms, cultural traditions and family customs influence and shape people's attitudes, e.g., if the dominant culture propagates a lifestyle that is unsustainable, pro-environmental behaviour is less likely to occur and the gap between attitude and action will widen.
3. *Temporal discrepancy*: Inconsistency will occur when data collection for attitudes and data collection for the action lie far apart (for example, after Chernobyl, an overwhelming majority of Swiss people were opposed to nuclear energy; yet a referendum 2 years later that ended a 10-year halt to the building of new reactors in Switzerland was approved). Temporal discrepancy refers to the fact that people's attitudes change over time.
4. *Attitude-behaviour measurements*: Often the measured attitudes are much broader in scope (for example, do you care about the environment?) than the measured actions (for example, do you recycle?). This leads to large discrepancies in results (pp. 79–80).

Arguments covering the gap between knowledge and action focus on two main schools of thought: behaviouristic and critical thinking (Courtney-Hall & Rogers, 2002, p. 284). Ajzen and Fishbein (1975) claim that attitudes do not determine behaviour directly, rather, they influence behavioural intentions, which in turn shape our actions. Intentions are not only influenced by attitudes but also by social pressures (Kollmuss & Agyeman, 2002). They concluded that the ultimate determinates of any behaviour are the behavioural beliefs concerning its consequences and the normative beliefs concerning the prescriptions of others.

**Figure 3.** Theory of reasoned action (Ajzen & Fishbein, 1980 p. 8).



The theory of reasoned action is considered to be the most influential and widely used expectancy-value models (Ajzen & Fishbein, 1975). It has been used to successfully describe behaviours in a number of fields (Fishbein & Middlestadt, 1987). Proponents of the theory believe it is useful in designing communication aimed at encouraging people to perform desired behaviour.

According to the theory, the best predictor of whether or not people will engage in a specific behaviour is their intention to engage in a behaviour. People's intention to engage in a behaviour is determined by two components, one personal (the attitude toward the behaviour) and the other social (the subjective norm, that is, the perception that those who are important to them think they should engage in the behaviour). The attitude toward the behaviour and the subjective norm determine the intention to engage in the behaviour (Ajzen & Fishbein, 1975).

A further development of Ajzen and Fishbein's work is the Model of Responsible Environmental Behaviour (Hines, Hungerford & Tomera, 1986). A meta-analysis of 128 pro-environmental research studies, found the following variables associated with responsible pro-environmental behaviour:

- Knowledge of issue: people have to be familiar with the environmental problem and its cause
- Knowledge of action strategies: people have to know how they should act to lower their impact on the environmental problem
- Locus of control: this represents people's perception of whether they have the ability to bring about change through their own behaviour. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and that change can only be brought about by other powerful actions
- Attitudes: people with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behaviour, yet the relationship between attitudes and actions proved to be weak

- Verbal commitment: the communicated willingness to take the action also gave some indication about people's willingness to engage in pro-environmental behaviour
- Individual sense of responsibility: people with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behaviour.

While this model is more sophisticated than that of Ajzen and Fishbein (1980), critics (Kollmuss & Agymen, 2002) have identified factors in the model that do not establish the relationship between knowledge, attitudes and behaviours.

Researchers have undertaken the challenge of providing information that taps into the psychological structure that develops understanding of how individuals or groups act in a pro-social manner. Pro-social behaviour is defined by Eisenberg and Miller (1987) as voluntary intentional behaviour that results in benefits for another. The motive is unspecified and may be positive, negative or both.

Stern (2000) believed that environmental intent and environmental impact are two different things and therefore the theories that attempt to explain pro-environmental behaviours are inadequate to understanding behaviour change. "Environmental intent is only one of the factors affecting behaviour, and often, it is not one of the most important. Many environmentally significant behaviours are matters of personal habit or household routine and are rarely considered at all" (p. 415). Other factors noted by Stern include income, infrastructure or people being unaware of the environmental impact their behaviour may have. Pro-environmental actions may occur for non-environmental reasons. A person may act in a pro-environmental manner because of a desire to save money, confirm a sense of personal competence or preserve time for social relationships (Kempton, 1993).

Stern, Dietz, and Guagnano (1995) developed a theoretical model of environmental behaviour that serves to identify and organise organisational, social,

and psychological factors influencing pro-environmental behaviour. The model states that the way in which people establish their world views and values is through social institutions. A world view represents a general knowledge base through which new information is examined and understood. If the information is comprehended it is incorporated into the world view system or else rejected as false. It is this process through which people develop new beliefs and then either participate in or discard a particular action.

Social values of particular relevance to environmental behaviour include consumerism, egocentric values of individualism or competitiveness, altruism, cooperation, and ecocentric values of environmental integrity (Brown & Cameron, 2000; Gardner & Stern, 1996). The way individuals behave is heavily influenced by social norms and expectations. Behavioural commitments and intentions are generated not only by personal norms and social norms, but also by the availability of specific plans or strategies for action, for example, people may move to a public transport corridor to avoid using their car if a reliable service is offered.

Historically, information campaigns have focused on changing attitudes in order to promote the desired environmental behaviour but efforts have met with only limited success. While attitudes are changed in the short-term, behaviour tends not to change (Gardner & Stern, 1996). Such efforts are likely to suffer because attitude changes will be unstable and transient if they are not supported by a consistent worldview and if they are created in the absence of social norms and specific action plans.

Situational factors are important in influencing the community to take part in pro-environmental behaviours (Eero, Grendstad & Wollebak, 2001). As Stern (2000) noted, the attitude-behaviour relationship is strongest when contextual factors are neutral, and it approaches zero when context is strongly in favour of or opposed to behaviour.

Brown and Cameron (2000) and Gardner and Stern (1996) believed a sound knowledge base is needed to establish constant pro-environmental behaviour. To achieve this, the information should provide an understanding of the adverse consequences if pro-environmental behaviour is not undertaken. People also need to be informed about how to engage in pro-environmental behaviours that are acceptable. In a review of literature, Zelezny (1999) found that educational interventions could effectively improve environmental behaviour. This finding does not support Cone and Hayes's (1980) and Courtney-Hall and Rodgers' (2002) argument that information is not enough to motivate an individual to act pro-environmentally and that educational interventions in general are ineffective in changing behaviour. Active participant involvement was positively related to effectiveness in improving environmental behaviour. Studies show that for the communication process to work effectively it is not only the information that is important but also how the information is provided to the receiver (Gardner & Stern, 1996; Stern, 1999).

The relationship between someone's attitudes and beliefs and how this relates to behaviour change is complicated. While education can change specific attitudes toward environmental problems, environmental attitudes are not always correlated with behaviour, and attitude change does not always lead to behavioural change.

## **2.8 The knowledge-behaviour gap in public communication campaigns**

When Tichenor, Donohue and Olien (1970) released their influential paper they said that the effects of the knowledge gap had been implicit throughout writings on mass communication and they had only provided a name for the effect. They described the knowledge gap process:

...as the infusion of mass media information into a social system increases, segments of the population with higher

socioeconomic status tend to acquire this information at faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease (pp 159–160).

The knowledge-gap hypothesis has important implications for public communication campaigns (Ettema, Brown & Luepker, 1983). The hypothesis implies that campaigns that provide information through the mass media will always work more effectively in higher socio-economic groups.

The link between socioeconomic status and knowledge gaps is agreed by other researchers (Ettema et al. 1983; Gaziano, 1983). The knowledge gap hypothesis then suggests itself as a fundamental explanation for the apparent failure of mass communication (Tichenor et al., p. 161). Weening and Midden (1997) claimed that mass media may in fact not be 'mass' but rather 'elite'.

However, there are a number of studies that concur there have been conflicting results in the study of the knowledge gap (Ettema & Kline, 1977, Brown et al. 1981). The underlying nature of the relationship between education and increasing knowledge gaps has also been challenged. While it might be assumed that cognitive resources or social ties lie at the heart of the educational gap in knowledge, others have argued that a plausible basis for the knowledge gap lies in the relevance of information (Holbrook, 2002).

## **Chapter 3: Methodology**

### **3.1 Introduction**

This research has its origins in the experiences of the author of this research as a public relations practitioner for a public organisation. After spending several years, and enormous amounts of public money, the frustration of not seeing a direct relationship between communication and behaviour led to this thesis. Public agencies have an expectation that the community will demonstrate a level conformity to the messages they send out. Sometimes the level of change shown by the public is obvious, for example, the change in attitudes toward drink-driving, but many times this level of change is negligible. With the investment of public money into communication campaigns, there is a responsibility to ensure that the messages are achieving the desired outcome. Therefore, a better understanding of the relationship between communication and behaviour change was needed to make the communication process more effective.

While many researchers have examined the effects of mass communication, relatively little research exists investigating the effects of mass communication on interpersonal family communication. People are confronted with numerous messages each day, from a variety of media in which public information messages must compete against each other, along with messages that are commercial orientated. Watson (2003) believes this barrage of messages leaves the receiver overwhelmed at the amount of information they are forced to view and/or hear and then process. If professional communicators want to have their messages achieve specific outcomes, for example, a behaviour change in a specific public or group, then an in-depth knowledge of the communication process relating to campaign communication is required. Herman and Chomsky (1988) state that in order for an organisation to be successful in managing media, they need a good understanding of how the media works. Developing knowledge in this area of communication will assist practitioners develop more effective campaigns. The McDevitt and Chaffee

(2002) study was based around communication interventions, utilising communication tools such as a media campaign or school curriculum, and how these can heighten political interest of the family member initially reached by the intervention. Building on this, the current study employs the same five-stage sequence that examines the flow of communication in a family.

The objective of this research is to investigate how messages from public communication campaigns stimulate interpersonal communication amongst family members, and how this communication affects subsequent family behaviour patterns. To achieve this objective, this study followed a similar procedure to that of McDevitt and Chaffee (2002), who examined adolescents' contribution to family communication patterns in relation to political activation.

The McDevitt and Chaffee model is a new measure for assessing the effectiveness of the relationship between communication within a family, and how those discussions may lead to changes in behaviour. However, it is yet to be replicated or extended. While the model has been designed for political communication, the current research provides an opportunity to test McDevitt and Chaffee's thinking in the context of pro-environmental behaviours.

The reasons the two public communication campaigns (the Big Clean Up and Clean Up NZ) were selected for this study are detailed in section 3.2. There is no fundamental methodological reason why pro-environmental campaigns were selected other than the sources of the campaigns, the Auckland Regional Council and the Clean Up NZ coordinator, were known and available to the researcher. However, the McDevitt and Chaffee model appears to be sufficiently promising as to be tested in other areas than that of political socialisation, and this presented an opportunity to do so. Buchanan, Boddy and McCalman (1988) wrote that negotiating access to organisations is more about chance than skill. While they recommended an opportunistic approach, they nevertheless offered five pieces of advice: allow adequate time; use friends and relatives wherever possible; use non-

threatening language to explain your research; try to offset reservations with respect to time and confidentiality; and offer a final report of your findings. Similarly, Glesne and Peshkin (1992) stated that “it helps to have an ‘informant’, an insider who knows the individuals and the politics involved, to advise you in making access decisions” (p. 34). However, it was fortuitous that access was available to two similar campaigns that allowed investigation of respondents’ reaction and behaviours following the communication intervention.

The Big Clean Up is a pro-environmental action programme that is an initiative of the Auckland Regional Council. The campaign was devised in response to the ARC’s legislative role as guardian for the environment in the Auckland region. The ARC is a regional authority comprising elected representatives from the four cities and three districts in the Auckland region. The main function and activities of the council can be divided into:

Transport – The Auckland Regional Council plays a central coordinating transport networks in the Auckland region. The ARC has two major roles: first, the ARC sets and oversees the implementation of the overall strategy for improving transport for the region which is stated in the Regional Land Transport Strategy (1998). The ARC co-ordinates the strategy’s development, review and implementation through the Auckland Regional Land Transport Committee. Second, the ARC plans and funds public transport throughout the region, including buses, trains and ferries.

Regional growth – With the population of Auckland growing at the rate of 40,000 people each year (Managing the Auckland region’s growth, 2003), the ARC developed the Regional Growth Forum to help in managing growth. Population growth can be problematic placing pressure on infrastructure and resources. The Auckland Regional Growth Forum, established in 1996, is a cooperative partnership between the

Auckland Regional Council and the region's territorial local authorities. Its brief is to develop and implement a strategy for managing the effects of growth in the Auckland region.

Parks and recreation – The ARC Parks network, established in 1965, is made up of 21 different parks, covering over 37,000 hectares of land with recreational, historic and ecological value. The parks offer a wide range of recreational opportunities and experiences. The network also includes the Auckland Botanic Gardens and Mt Smart Sports and Entertainment Centre at Penrose.

Environmental management – The Environmental management section of the ARC is focused on minimising the adverse effects of regional growth on the environment. Specifically, this area focuses on air quality, coastal management, efficient resource use, soil, water and aquatic resources. The ARC also provides funding for pro-environmental initiatives and hold awards every two years to recognise individuals and organisations that have made positive environmental contributions.

Residents are encouraged to register with the council to be part of the BCU. They can do this by supplying information on the Internet or by calling the ARC's 0800 number. The council then sends out information about the campaign and instructions on how the receiver can set about performing the necessary tasks. As at April 2003, the ARC had 44,000 households register to be part of the BCU (Auckland Regional Council, 2003).

In contrast, the Clean Up New Zealand campaign is the creation of a trust that receives funding from commercial sponsors and the Ministry for the Environment. The Clean Up NZ week programme was first run in New Zealand in 1998 and has since continued to run each year in September. In 2003 over 190,000 people

participated in a Clean Up NZ event. Detail of the differences and similarities of the two campaigns can be found in section 1.3.

While the Clean Up NZ programme is open to people of all ages, in 2003 emphasis was targeted at school-aged children between 5–15 years. This was a move based on qualitative research that suggested schools found the Clean Up NZ week an easily accessible, manageable project providing free resources and education to undertake a simple action – reduce litter (About Clean Up NZ, 2003).

With education resources in the classroom it was hoped these messages would be taken on by the students and become new behaviours. It is at this point that this study focuses on the actions of the message recipients. This research concerns itself with the actions of the children once they have received the campaign messages, and what communication activity then occurs.

The study examined the flow of communication within the family unit in response to campaign messages. In particular, it concentrated on the upward and downward communication between parents and children. Both campaigns had full and detailed strategic communication strategies and tactics that covered a range of demographics. However, this research chose to focus on the flow of communication in one direction for each campaign. This decision was because of limited time restraints and the need to maintain realistic thesis objectives. The appropriate selection for upward communication flow, from children to parents, was the Clean Up NZ campaign. With a focus on providing messages and resources to children, it allowed an excellent opportunity to examine the results of an intervention into the family environment. The BCU provided a chance to study the downward flow of communication, from parents to children as Auckland Regional Council-commissioned research showed that over 90 percent of people who registered with the BCU were over the age of 20 years, and over 80 percent were over the age of 30 years (Research Solutions, 2002).

The use of two campaigns would allow for comparisons to be made between two styles, examine the success factors and also any failures of the campaigns.

### **3.2 Campaign selection**

The Big Clean Up and the Clean Up NZ campaigns both met the definition of public communication campaigns as stated by Rice and Atkin (2000). First, they were both conducted by public organisations and had no commercial agenda. Second, they used a number of traditional communication channels, such as brochures, advertisements and posters. Finally, the campaigns focused on an issue that the public deemed to be important. The focus of both the BCU and Clean Up NZ was pro-environmental behaviours, and recent years have seen green issues in the forefront of public consciousness. The desired outcomes of the campaigns were to reform the behaviours of individuals to improve the lives of others.

The two campaigns were conducted simultaneously through 2003. However, the BCU is an ongoing campaign, which began in 2002, while Clean Up NZ is held each year in the month of September. The interviews with families for the Clean Up NZ component of this study were conducted in September 2003.

Differing flows of communication provided a further reason for the selection of the Big Clean Up and Clean Up NZ. That is, the BCU has a downward flow of communication, from parents to children, while Clean Up NZ is designed to flow upward, from children to parents. These contrasting communication flows provided an excellent opportunity to examine the role of the person who introduces the information into the family and how other family members responded to the messages.

The two campaigns have a number of different audiences at which they target their messages. However, this research will concentrate on the way the BCU aims its

messages at adults and the way Clean Up NZ aims their messages toward children. The Big Clean Up messages were directed mainly toward adults and included messages that were relevant to that audience, for example, the use of public transport for commuting. The BCU messages, as opposed to those of the Clean Up NZ campaign, did not contain instances that were intended for parents to engage in interpersonal communication with their children.

### **3.3 Selection of participants**

As an ex-employee of the Auckland Regional Council, the researcher was able to utilise existing contacts and knowledge of systems inside the organisation to make contact with a group of participants. From the first contact with the co-ordinators of the Big Clean Up, in January 2003, there was plenty of support shown toward the research project from the ARC. They agreed to assist in the selection of participants by providing contacts with people who were involved with the BCU programme. The registration process to join the BCU programme requires people to supply personal details, as highlighted in section 1.3.1 and 3.1, and that information is protected under the Privacy of Information Act 1993. This necessitated an ARC staff member contacting a small sample of those registered to gauge their willingness to participate in this research. The contact details of those who were willing were passed on to the researcher. From the list of six initial names provided from the Auckland Regional Council, three families agreed to participate. (Two families had changed their minds and decided not to participate in the research and another family, despite much effort to accommodate their schedule, were continually unavailable to be interviewed and finally reneged on their initial commitment to participate.) Comments from the Auckland Regional Council staff member who was contacting possible participants suggested that people were reluctant to engage in the research. It is not known how many BCU participants the Auckland Regional Council staff member contacted to get the preliminary list of names.

To achieve the research objectives associated with the downward flow of communication, participants needed to be located from schools who had been involved with the Clean Up NZ programme. The researcher decided to contact schools in the Palmerston North area. This decision was based on the convenience of locality, availability, and the opportunistic approach as stated earlier by Buchanan, Boddy and McCalman (1988). Statistically speaking, Palmerston North as a city is a good representation of New Zealand as a whole (Palmerston North City Census Information, 2001).

Information provided by the Clean Up NZ coordinator about the schools in the Palmerston North area who had taken part in the 2003 programme activities was used to make contact with potential participants. After contacting, and speaking to, the principals of two schools that were not willing to participate in the research, the researcher contacted Carncot School which agreed to take part. Carncot is an independent school for girls, located in Palmerston North, with a roll of approximately 160, ranging from Years 1 to 8. According to the Education Review Office (Anderson, 2002) the students at Carncot School receive comprehensive and extensive programmes to challenge and promote excellence in all areas. It was also found that curriculum, staffing, equipment and premises are of such a high quality as to far exceed statutory requirements.

Following a meeting between the principal of Carncot and the researcher, it was agreed that families would be initially contacted through a newsletter, sent by Carncot, addressed to the parents. This newsletter would explain the background and purpose of the research and if the family wished to take part in the study their details would then be passed on to the researcher to be contacted directly. Once contact details were available, the participants were contacted by phone. An explanation of the study was given and participants were made aware of their rights as regulated by the Massey University Human Ethics Committee. Interview appointments were made at the convenience of the participants.

Interviews were held with members of seven families (a total of 20 individuals). Three of these families (n=9) had participated in the Big Clean Up, and the remaining four families (n=11) participated in the Clean Up NZ campaign.

Patton (2002) stated that information-rich participants are able to offer a great deal of insight into the issues of central importance to the research. Consequently, the participants in this study were selected because they were 'information rich' in the area of the research. This richness is based on the participants' experiences with either of the campaigns and any communication that arose from exposure to the campaign messages. Therefore sampling is aimed at participants' insights and experiences about the campaigns, not from a generalisation from the population. Quantitative methods typically depend on larger samples selected randomly whereas purposeful qualitative selection can be relatively small, even single cases (Patton, 2002). Patton suggested the validity, meaningfulness and insights generated from qualitative inquiry have more to do with the information richness of the cases selected and the observations and analytical capabilities of the research than with the sample size.

### **3.4 Ethical considerations**

Approval was required from the Massey University Human Ethics Committee to undertake this research. This is standard procedure for any student of the University who wishes to conduct research involving human subjects. As part of the researcher's obligation to inform participants, details were given about the research. The participants were also assured of confidentiality and were under no obligation to participate or answer questions they did not want to. The links between the research findings and individual participants, who supplied the data, are limited, and information gathered from the study was not accessible by any third party not involved in the study.

MUHEC go to great lengths to ensure the safety and protection of children while they are participants in research. This can be seen in the Massey University Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants (2004). The Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants, has been developed to ensure that research, teaching and evaluation activities undertaken by staff and students of Massey University are consistent with Section 6 of the Education Act 1989 (p. 3). Children are defined in the code as being under the age of 15 years and permission must be sought from their parent or guardian for them to participate. Due to the nature of the current study, family communication flows, it was predicted many of the participants would be under the age of 15. The requirements of the code were considered at each step of the development and implementation to ensure the wellbeing of children involved in this study.

Once MUHEC cleared the research proposal, permission was sought from the organisations conducting the campaigns. Initial consultation for the study began with the BCU campaign coordinator at the ARC in early 2003. After a telephone conversation, which led to a meeting, in April 2003, the organisers did not perceive any potential problems with their organisation assisting in the study.

Preliminary contact with Clean Up NZ took place in April 2003. The Clean Up NZ trust employs one person to manage the operational aspects of the campaign. As with the BCU, dialogue with the campaign manager commenced over the telephone. This conversation instigated the needed permission to allow the research to engage with the Clean Up NZ programme. Soon after, the campaign manager provided contact details for school based programme coordinators in the Palmerston North region.

### **3.5 Pilot study**

A discussion guide (see Appendix 1) was developed and trialled with a volunteer family that had recently become involved in the BCU programme. The family used in the pilot study was approached by the researcher and asked if they were willing to assist at the development stage of the study. The family was known to a staff member of the Auckland Regional Council who was involved in the BCU project. That staff member passed on the contact details to the researcher, once permission had been sought and granted by the family. The pilot testing took place over two meetings at the home of the family and both meetings were held during the weekend to allow for the availability of all five family members.

After the initial meeting with the pilot family it became obvious that it would be difficult to structure the discussion rigorously as was intended by the original guide. In order to allow for the diversity in family culture it was apparent that flexibility was essential to the questions. For example, certain lines of questioning and investigation would not be appropriate for some families and individuals. This was especially pertinent when dealing with young children, as during the pilot study some questions had to be explained in very simple terms to children between 8 and 12 years of age (information about the participants is located in Appendix 1). This is in contrast to the teenagers, who had a greater ability to determine the meaning of questions and answer accordingly.

The lessons from the pilot study also saw significant changes to the way the sample group was questioned. The use of Likert type questioning did not provide the in-depth information that was needed for this study. In light of this finding, the main method of data collection was changed to a more qualitative-based style, in which the interviewer used more open-ended questions. This allowed the participants the opportunity to explain their experiences more fully.

The interview questions developed before the pilot study were changed to become more informal as the previous format did not allow participants to add to their experiences. In addition, the questionnaire was changed to allow all members to be present during the interview. Originally, the interviews were designed for one-on-one discussion, for example, with the family member who initiated the intervention. However, this was not always suitable, as it was found that this could isolate a younger member of the family for questioning, making younger participants more uncomfortable and less willing to provide data.

### **3.6 Method of data collection**

For the purpose of this research, the term 'family' was defined as at least one child and one parent living in the same dwelling. One traditional 'family' definition is a husband and wife and their biological or adopted children who share a dwelling and other resources (Baker, 2001). However, as Baker pointed out, this definition covers only 30 percent of New Zealand families, as many people live in dwellings with extended family. This may include grandparents, aunts, uncles and in-laws. It is by this wider definition of family that this current research is based on. Another factor determining the selection of this definition is it is analogous to that used by McDevitt and Chaffee (2002) in their research in this area.

Personal interviews with campaign participants were used to collect data for this research. Within qualitative approaches to communication research, interviews are a useful form of data collection because they allow exploration of perspectives and perceptions of various stakeholders (Daymon & Holloway, 2002).

The semi-structured interview is one of the most frequently used qualitative methods of data collection (Selman, 1980), and was employed in this study to gather the needed information from participants. An interview guide was developed focusing on the issues to be covered. The issues ranged from current pro-

environmental practices, media use, interpersonal communication, and behavioural changes due to campaign messages. While the sequence of questions was not strictly the same for each participant, the interview guide ensured that similar types of data were collected from all the participants. A total of 14 interviews were conducted, each of the seven participating families being interviewed twice: an initial interview, and a follow-up six weeks later. All interviews were conducted in the homes of the participants by the researcher.

The first interviews focused on the initial pro-environmental intervention and the individual's response to receiving the campaign messages as well as any subsequent communication between family members. The second interviews concentrated on the remaining three themes: expectations for civic competence, reciprocal influence and civic participation (these five steps are discussed in detail in sections 2.5 and 3.4). The four to six week gap between the interviews allowed the family to move through the stages of the five themes. While McDevitt and Chaffee (2002) do not state how long a family may take to work through the process, which in their instance was political communication, it was assumed that changes in behaviour, in respect to environmental issues, would not occur quickly. Priest (1996) points out that there is no absolute number of times a participant needs to be interviewed. The original work (McDevitt & Chaffee, 2002) contained a two stage interview process and this was copied in this study to maintain a reasonable replication of the process.

Unlike a questionnaire framework where detailed questions are formulated ahead of time, semi-structured interviewing can start with more general questions or topics. This style of interviewing was shown to be more suitable for this research as a result of the initial pilot study, detailed in section 3.5, where more structured, detailed questioning was used.

Generally, members of the family were spoken to in a group, but in some instances family members joined the discussion progressively during an interview. On two

occasions people were unable to stay for the duration of the interview and were spoken to first before the rest of the family. The interviews undertaken for this research varied from 40 to 75 minutes. All discussions with the participants were recorded so the conversations could be analysed later. Permission was sought from all families and individual members to allow the use of a recording device. Ethical issues surrounding the use of a recorder were discussed and explained as detailed by the Massey University Human Ethics Committee (MUHEC).

Before the interviews began, several minutes were spent building a rapport with the family, with a particular emphasis placed on talking to the younger participants. This time was valuable to build trust with the younger participants to ensure they would be comfortable talking about the issues covered in the interview. Research has shown that the quality of adult-child interactions depends on the extent to which adults are able to provide choice and support children's initiatives, as opposed to taking control of the interaction to meet their own agenda (Breakwell, Hammond & Fife-Shaw, 1999).

A number of factors influence both the quantity and quality of information children provide. These include the relative power of the adult interviewer compared with the child, child factors, characteristics of the interviewer, and the interview context and interview techniques (Bussey, 2003). Some general principles when interviewing children include: the importance of using consistent prompting, which may include cue cards; a capacity to focus flexibly on topics the child introduces to the conversation; the use of open-ended rather than closed questions; and the use of simple language. The researcher attempted to use all of those when interviewing the children for this study.

Interviews have the tendency to draw socially acceptable, a problem that is significant in research (Sudman and Bradburn, 1982). When a question about socially desirable or undesirable behaviour or attitudes respondents can appear or act in a way that feel may be more socially desirable. However, with semi-

structured interviews, only some of the questions are predetermined, and interviews are always done face-to-face. This allows the interviewer to use open-ended, lead-in questions to direct the respondent towards certain issues of interest without directing the respondent towards a desired response (Taylor-Powell & Steele, 1996).

## **Chapter 4: Results**

### **4.1 Introduction**

This chapter presents the findings from the interviews held with seven families, who participated in either the Big Clean Up or Clean Up New Zealand. The following data derived from discussions with a sample of participants involved in pro-environmental campaigns. Transcripts of the interviews were analysed, using McDevitt and Chaffee's (2002) methodology, for themes in relation to pro-environmental communication among family members that had been initiated through an intervention as a result of the campaign messages.

The findings of these interviews are reported as they relate to this thesis's research question: How do public communication campaign messages impact on family interpersonal communication and behaviour? The research is based on the model of family activation developed by McDevitt and Chaffee. Their work suggests there is a five-stage sequence in which information is introduced into a household through to civic participation outside of the home. The themes of the five-step sequence are:

1. Individual response
2. Interpersonal communication
3. Expectations for civic competence
4. Reciprocal influence
5. Civic participation

The themes are detailed more fully in section 1.3.4.

### **4.2 Interviews: The Big Clean Up**

To benchmark any possible changes that occurred as a result of campaign information, it was important to obtain some understanding of an idea of the family culture and establish existing patterns of communication and behaviour surrounding pro-environmental issues and activities. These initial interviews of the three families who participated in the BCU campaign were held in July 2003.

Both series of interviews investigated the communication and behaviours surrounding recycling, composting and eco-friendly consumption because these are the activities that the BCU participants received information about. For this research these behaviours can best be defined as:

*Recycling* – The series of activities by which discarded materials are collected, sorted, processed and converted into raw materials and used in the production of new products

*Composting* – Composting is a natural process of decomposition that turns garden and kitchen waste into a fertile, organic soil conditioner

*Eco-friendly consumption* – decisions made about the environmental sustainability of products when purchased. For example, consideration of recyclable packaging, amount of packaging.

#### **4.2.1 Prior behaviours**

Despite BCU participants being required to register with the Auckland Regional Council to initiate the flow of messages, it is not the campaign participation stimulus that is being investigated. Rather, it is the subsequent communication within the family based on the BCU messages.

Research conducted by the ARC reported that people who participated in the BCU had a propensity for pro-environmental behaviour (Feldhaeuser, 2003) and all

three families interviewed for this part of the study confirmed this finding. For example, one of the three interviewed families had previously been active in Greenpeace. However, this was several years ago and the family were no longer members. One parent in family 3 was involved in the early development of the Green Party. This person also had let his membership with the organisation lapse but still maintains the pro-environmental ethos that is associated with the group.

All three families who participated in the BCU, stated they were previously active in pro-environmental behaviours around the home. Table 4 below shows the pro-environmental behaviours in which each family was involved.

**Table 4: Pre-intervention pro-environmental behaviours: The Big Clean Up**

Type of pro-environmental activity	Family 1	Family 2	Family 3
Recycling	√	√	√
Composting	√		√
Eco-friendly consumption			√

The range of behaviours varied from the simple use of curbside recycling, to the more time-consuming commitment of belonging to a beach care group. However, most activities were based around recycling, litter collection and composting:

*We have been regular recyclers since the city council gave out those bins you can chuck all your plastic milk bottles and stuff in... (parent, family 2)*

*I saw a worm bin at a garden show a couple of years ago and I really wanted to get one... my grandmother is real hard out into gardening and she helped me set it up (child, family 1)*

While some of the participants' behaviours were motivated by convenience, such

as public transport use over car because of parking problems or turning off lights to save on the power bill, there was a strong trend toward a genuine care for the environment. These findings are consistent with the research conducted by Gardner and Stern (1996) and Brown and Cameron (2000).

*[Our behaviour] is all for the concern of the environment and it just becomes part of your lifestyle (parent, family 2).*

However, all the families in the BCU sample were already practising many of the behaviours prescribed by the ARC in the information material.

#### **4.2.2 Theme 1: Individual response**

This theme considers behaviours and communication surrounding the communicated issue, how the intervention came to be and behavioural effects of the intervention.

In each of the families, one person chose to register with the Auckland Regional Council to become a receiver of the messages that are the essence of the BCU. According to McDevitt and Chaffee (2002), in a family, these people have the ability to act as the vehicle for both communication and behaviour change.

The reasons for joining the campaign varied for each family. Participants made the following comments about how and why they joined:

Family 1: The family received the information about the BCU through the Rodney District Council's rates notification. The brochure was added as an inclusion in the envelope, as the family were already active in some of the suggestions made in the brochure.

Family 2: The person responsible for providing the intervention did so after seeing the television advertisements and calling the 0800 number. No specific reason was stated for joining the BCU.

Family 3: The intervening member of this family had seen the television advertisements and also received promotion material about the BCU, through the mail. In the initial interviews, the registering participant stated that he did not believe the campaign was of much value to him or his family. However, he stated the campaign endorsed the beliefs and behaviours he currently held.

There is no indication that any of the family members sought any further information on the issues that were dealt with in the campaign. Families 2 and 3 stated they had not sought any further information through the media or on the Internet. Members of family 1, while not exclusively searching for BCU information, stated they had seen pro-environmental stories in the media. They claimed their involvement in the BCU had acted as a mechanism for their increased interest in such media stories:

*If I saw something in the paper I'd probably be more inclined to read it now than in the past (parent, family 1)*

*I am aware of the things that are going on in the media but I would go out of my way to read them (parent, family 3)*

*Yeah, I would read [pro-environmental stories] if I saw them in the paper or on TV (child, family 1)*

#### **4.2.3 Theme 2: Interpersonal communication**

This theme considers the acquisition of knowledge and examines how any new information is transferred through other family members. This will enable the communicator to see if the messages stimulate interpersonal communication amongst family members.

Not all parents had read the material that was sent out from the ARC. While at least one spouse was aware of the main messages from the material, only in one instance had anyone shared the information with their partner.

In families 2 and 3, the pro-environmental communication was independent of any messages they had received through the BCU. That is, the person who made the initial contact with the BCU, who in all cases was a parent, did not share that information with other family members:

*I haven't spoken to any of my family about [the BCU]. Not even with my wife. I think she may have seen the material. (parent, family 3)*

*Dad hasn't really said anything about it really" (child, family 3)*

All three interviewed families indicated that the campaign had little effect on communication about the BCU's messages, or other environmental issues. When prompted about the level of communication activity, the responses indicated the Big Clean Up had failed to initiate dialogue:

*Pretty much [no communication] (parent, family 1)"*

*I skimmed through [the BCU information]... it didn't mean anything at all. It certainly has not had any influence here... there was no discussion about any of it (parent, family 3)*

*My husband saw the stuff that arrived and said he couldn't be bothered reading it but would rather be told what to do (parent, family 2)*

The parents of the BCU-registered families believed they did not have their knowledge or attitudes challenged or develop from the messages that they had received through the BCU. It was difficult to state an instance where there was a significant change in behaviour. In fact, all interviewed parents suggested the BCU messages did not result in an increase in their knowledge and they were quite dismissive of the material that was sent out.

In family 1, the mother had a good understanding of the messages received although she had not communicated them to her husband until the researcher was there. After hearing the messages the husband just expelled a confused, 'Oh'.

Two children expressed knowledge of the campaign through their school. However, their level of understanding was not sufficient to enter comfortably into a discussion about the issues with others. Most of the knowledge they had acquired was not based on the information that was received from the BCU. All of the child participants admitted performing recycling, composting or environmentally aware consumption before the family registered for the BCU, but did so under direction from a parent:

*We get told to [do it]... (child, family 1)*

*[Recycling] comes naturally now, like, to put the bottles out into one container... we used to get growled at (child, family 2)*

It is interesting to note that although the children recycled and composted, few really gave evidence of understanding the rationale behind these behaviours. Children from two families commented that while they did not mind separating the

rubbish or taking food waste out to the compost they were not sure of the reasons behind their actions, or the effects of not doing them.

One family questioned the value of the BCU information. They indicated one reason that communication did not result in an intervention is that *“there are so many other things going on”*. The amount of information also appeared to have a bearing on whether it was read or not. It was suggested, by two members of family one, that too much information was sent out and the amount of time required to read the material acted as a barrier.

All the family members indicated they were comfortable discussing environmental issues with each other, and there did not appear to be any apprehension about partaking in conversations. While no participants of the BCU sample group would have described themselves as ‘fanatical green types’, there was enough pro-environmental disposition within the family for a discussion to flow naturally.

McDevitt and Chaffee (2002) stated that not all family members may share the same level of interest in the issue as others. In two cases it was the mother who had the motivation to register and drive the current pro-environmental practices. The fathers, while stating they had environmental concerns, were not so enthused about the BCU or wider environmental issues. As a result, they were less likely to stimulate or partake in communication regarding pro-environmental issues. The father in family one admitted that he was more inclined to get the BCU, or other pro-environmental information from someone else rather than reading it himself. He saw his wife as more of a source of information than the material. The father in family two was unavailable to be interviewed on both occasions but his wife indicated that he had shown *“no particular interest”* in BCU matters.

#### **4.2.4 Theme 3: Expectations for civic competence**

This theme considers any changes in thinking and behaviours within the family and any shift in family culture as a direct consequence of the intervention. The communication may support increased expectation for behaviour change among family members.

As stated in section 4.2.3, all the interviewed families struggled to identify patterns of behaviour or communication that were affected or initiated by the messages sent out from the BCU campaign. One parent in family 2 admitted having her current behaviour endorsed, but no new behaviours adopted. She felt good to being part of an organised campaign that sanctioned behaviours that she was already engaged in.

All the families had a good understanding of pro-environmental messages. However, most of the BCU messages appeared to have little overt impact on these receivers' behaviours. With all families admitting to various pro-environmental behaviours in the past, it can be suggested that those behaviours are now entrenched in family culture. Communication within the family, before BCU registration and the receipt of subsequent messages, was regular and important enough to determine attitudes and behaviours before the BCU acted as an intervention:

*We have always talked about that, about [litter] ... I remember my parents always going on about it to me and I suppose I just, kind of, carried that on (parent, family 1)*

When all the families were asked if they had talked about the BCU messages with another family member, the reply from all of the interviewees was a resounding 'no'. Communication surrounding the introduction of the new information was also limited. While some discussion occurred between family members when the information kit arrived in the mail, there was little ongoing discussion. There was no indication that the messages were discussed at any situation where the whole

family could partake in learning or understanding, for example during dinner table conversations.

Parents said that they would often communicate with their children for specific instances, such as *“put that bottle in the recycling”*, or *“don’t put the food in the rubbish, go and put it in the compost bin”*. All families commented on the need to remind the children of their duty to act within the expectations of the family culture. However, again, these episodes of interaction were not associated with messages from the BCU as they had all reported instances where parents needed to remind children of household duties before the BCU messages entered the family.

#### **4.2.5 Theme 4: Reciprocal influence**

This theme considers changes in the behaviours of family members if communication has led to a greater understanding. As family members achieve higher levels of competence, they acquire an increased capacity for reciprocal influence that helps to sustain interest in civic affairs.

With the flow of downward communication, that is, from parent to child, there was no evidence that any substantial communication process occurred as a result of the intervention from the BCU. While there was verification of existing pro-environmental practices, it was apparent from the interview process that these were already in place before registration with the BCU.

Both parents of family 1, along with one of their children, and one parent in family 2 noted a shift in the level of expectation they had of their own pro-environmental behaviour when they became aware of the new information. However, based upon the participants’ statements about their behaviours before and after exposure to the campaign messages, there was no direct connection between the new knowledge and any significant behaviour change. Two families had members who

were able to recite the BCU messages almost verbatim, but this knowledge did not seem to be enough to engender behaviour changes or interpersonal communication about the message issues amongst family members. This was despite an admission that they felt comfortable enough with their depth of understanding of the issues behind the BCU messages. In families 1 and 2 there was an increase in awareness of environmental issues and solutions that may overcome some of the results of pro-environmental inaction. These tended to be basic actions that were based on existing knowledge and behaviours. However, participant 4 was made more aware of the relationship between car uses and air pollution. Because of this she wanted to ride her bike to school but a number of circumstances made this not possible, for example, her age (12), distance from school, and the dangers of the busy roads in the area.

*I have become more aware of packing in the supermarket... it's made me more aware of it, and it made me think that we should be trying to educate other people on what to do (parent, family 1).*

Children were expected to participate in pro-environmental practices around the house, which mostly included household duties, for example taking food waste out to the compost bin or separating recyclable materials. The involvement of the children in these behaviours was not discussed as they were expected to contribute as part of their role in the family.

#### **4.2.6 Theme 5: Civic participation**

This theme considers the increased motivation to participate in the new behaviours outside the house.

Activation of pro-environmental behaviours had occurred before participation in the BCU. There had been a flow of communication about pro-environmental

behaviours before the BCU messages were apparent to all families. All the families were already accomplished in the behaviours this study examined, see 4.2.1, and had been for a number of years. This was particularly evident in families one and three where behavioural patterns had been established by the parents and adopted by the children. The parents of these families stated they had communicated with their children about environmental matters in the past, and were likely to do so in the future; however, none of this communication was based on the family's association with, or the messages of the BCU. The social interaction that occurred amongst family members had developed a culture in which all participants in each family believed these behaviours would continue.

Only one family admitted to being active in environmental activities outside the house and could be considered 'green', but all parents said they would comment if they saw an instance where close friends and family were throwing out recyclable materials

*I find it annoying now when I go to other people's houses and they chuck everything in the rubbish. It's ignorant really (parent, family 1)*

The children stated they would make similar comments to close friends at school but they would not make the comment to people they did not know very well.

### **4.3 Interviews: Clean Up New Zealand**

In contrast to the Big Clean Up, Clean Up NZ campaign information entered the family through children. As part of the Clean Up NZ campaign-week school curriculum, the children received the messages in their classroom. These teachings were the basis of the pro-environmental interventions that the children took home to their parents and other family members. While previous generic pro-environmental messages may have assisted in the development of the child's base

knowledge about environmental issues, there was little reference by the children to other messages other than those of Clean Up NZ. Based on this the finding it can be assumed that any behaviour changes that occurred in the family can be sourced back to the communication initiated by the Clean Up NZ messages, which the children received in the classroom. The interviews conducted for this part of the research were completed with four families and were held in October 2003.

Carncot School had four goals to achieve for Clean Up NZ 2003. While some of the goals were specifically for 2003, there was also hope that it would assist in reaching longer term goals. These were:

1. To establish an edible vegetable garden using the vermicompost from the Carncot worm farm
2. To reduce, reuse and recycle school rubbish
3. To have a zero waste week from 1<sup>st</sup> to 5<sup>th</sup> September at Carncot
4. To aim for a zero waste school by 2006.

The results from the efforts were significant. The students spoken to said they had reduced school rubbish from 140 shopping bags down to 10 bags in 5 weeks and all the school's waste was separated and left at the curbside for recycling collection each week. They also established a vegetable garden from which many of the school's families brought produce.

#### **4.3.1 Prior behaviours**

As with the BCU, it was important to determine the pro-environmental behaviours and communication that occurred before the Clean Up NZ interventions. Three out of the four families stated they were already active in some form of pro-environmental behaviour. Table 5 describes these.

**Table 5: Pre-intervention pro-environmental behaviours: Clean Up New Zealand**

Type of pro-environmental activity	Family 4	Family 5	Family 6	Family 7
Recycling	√		√	√
Composting	√			√
Eco-friendly consumption				

As Table 5 shows, these behaviours mainly consisted of recycling, but also included worm bins and composting. While the families performed these tasks, they stated they had no association with wider pro-environmental issues including membership with pro-environmental organisations, such as Greenpeace or the Forest and Bird society, or self-motivated actions, such as organising a clean up of a local park:

*We have had a worm bin for about 4 years. We got one because I fancied the idea of it... recycling is something we do second nature. We always have (parent, family 7)*

It was interesting to discover the pre-campaign behaviour of one farming family who buried all their waste, including all recyclable materials, farming materials and dead stock, down the back of the farm. According to the family interviewed, this is standard farming practice and what they had done with their waste for a number of years. In the back of their minds they were aware this practice was unacceptable but continued with this process.

*I knew about recycling and how it worked but wasn't really aware of the consequences of what happens to waste when it goes in the ground (parent, family 5)*

### 4.3.2 Theme 1: Individual response

All the children of the families interviewed were aware of the recycling, composting or eco-friendly consumption practices in their homes. However, there appeared to be little understanding of why these actions were taken and the wider consequences of their doing or not doing so. None of the children, or their parents, seemed to have heard of Clean Up New Zealand before and knew nothing about the organisation behind the campaign.

*I didn't know about the Clean Up New Zealand stuff before Miss Richardson told us about it in class (child, family 5)*

*... I'd not heard about it either. Not even from my elder daughter (parent, family 4)*

Even though there was a positive perception by one child (interviewee 11) toward recycling she freely admitted to not backing up that belief with action. The mother also agreed and went on to state that her husband would fill the rubbish bin if she did not intervene.

All students noted that they had looked for environmental stories in the media on at least one occasion after the initial intervention. Three students also stated instances of their visiting the Clean Up NZ website. This is a similar finding to a McDevitt and Chaffee (2000) study where school curriculum information about voting was associated with significant increases in attention to news, particularly students' newspaper reading. Student-parent discussion increased, particularly among low socio-economic families. In low socio-economic households, parents' election knowledge increased significantly.

*Yes, I have seen some stories in the paper, in the kids' section, that I read because I'm interested in that stuff now... I also saw a story about Clean Up New Zealand in the local paper (child, family 7)*

Two of the parents, once they had adopted the new behaviours, also said they had sought out further information to help in developing their knowledge further:

*I have contacted the Recycling Depot for information on what things I can recycle. I wasn't too sure about the plastics. We will probably get more info when we go... (parent, family 5)*

Three of the four children also noted they had talked about the activities and issues that confronted them in the Clean Up NZ campaign with the school friends and fellow classmates. In one interesting case, one of the siblings, from family 4, stated she had received more information from talking to her friends at school than she did from the conversations at home:

*I have started recycling at school because of what [her] class did [as part of Clean Up NZ]. My friends also think that recycling is a good idea. They have talked about it (child, family 4)*

Three of the four parents interviewed commented on how the children had sought information on the household activities that related to their new of knowledge of pro-environmental issues and behaviours. The parents mentioned instances where they had to detail how waste was disposed of and what became of recyclable materials:

*[She] came home and asked about what we did here. She hadn't done that before (parent, family 4)*

*I asked mum what happened to all the stuff we throw out and she showed me (child, family 4)*

All the families could state an occasion where they been engaged with the media, such as reading the paper or watching television, in a search for further information or knowledge. They also commented they had read a story in the paper that they may not have done before their involvement with Clean Up NZ and exposure to the messages.

#### **4.3.3 Theme 2: Interpersonal communication**

All the children who were receivers of the Clean Up NZ messages spoke openly and widely among their respective families about what they had learnt. Not only were there a number of discussions held in the family about the intervening messages, but also the detail of these discussions was of significant interest. All the parents said they were aware about the Clean Up NZ campaign and what events and activities were happening at the school. All five parents interviewed stated their understanding of the activities was as a result of the children coming home and talking about Clean Up NZ. These messages not only flowed upward from children to parents but also sideways to other siblings. This was evident from the amount of knowledge of the campaign messages that brothers and sisters of the sibling credited with the knowledge intervention:

*I spoke to mum and dad about what we were doing at school (child, family 7)*

All the families said that the conversations happened in both group settings, for example, dinner table conversations, car trips, and also one-to-one situations, for example, when tucking into bed. While the most frequent discussion partner was the mother, communication was reported across all members of the family.

There were signs that all the children had taken an interest in the messages from Clean Up NZ at some level. As the children became stimulated by the messages and increased in knowledge of the issues, they were able to communicate effectively with other members of their family. This established an upward two-step flow of communication. That is, the children were able to set the agenda for communication, which became influential in determining the parent's search of knowledge of the issues that flowed onto behavioural outcomes. It is possible to directly attribute a number of behavioural changes in family 5 to the amount of interpersonal communication that took place as a result of the intervention. The child responsible for the intervention was particularly motivated by the messages that were received. This was possibly because due to the extent of environmental harm that was occurring as a result of what the family was doing to dispose of their rubbish. Once the child had developed an understanding to the consequences of dumping non-organic waste she sought to engender a change in practice.

While the families showed they were pro-environmentally active (see Table 5), three out of the four children stated they had learnt more about those behaviours through the Clean Up NZ curriculum material than from their parents. The remaining child said she learnt approximately half from school and half from her parents. It was not until the children started discussing the issues with their parents that understanding of their home behaviours was attained.

As with the findings in the BCU, there was a discrepancy shown by the fathers between what they thought was a good idea and their behaviour. There was a perception from other family members that while the fathers believed that recycling was a good idea for the family to participate in, they tended not to share in any household pro-environmental activity. However, this information was based on the perceptions and opinions of the mother in the family as the fathers were not available to speak for themselves:

*He thinks [recycling is] a great idea and we should all do it, but it's just getting him doing it as well (parent, family 4)*

#### **4.3.4 Theme 3: Expectations for civic competence**

All the families who were spoken to agreed there had been discussions within the family about the messages introduced through Clean Up NZ. However, not all the families stated there had been behavioural changes as a result of the communication. Out of the four families interviewed, two said there was some change as a result of the interventions of Clean Up NZ, and one said there had been no change at all to their behaviours. However, there was one family where some dramatic changes occurred as a direct result of the communication surrounding the intervention.

Two parents, from different families, made comments to the effect that they wanted to encourage the enthusiasm the children had shown toward their involvement with Clean Up NZ:

*When they were coming home from school and were all excited and motivated about it you pay attention. It took a while, I heard what they were doing at school, after I heard a bit more it finally got me thinking I've got to do something (parent, family 5)*

*[She] came home from school and was saying 'did you know that we're supposed to do this and that' (parent, family 4)*

The children's enthusiasm for the campaign messages and the communication they took into their homes resulted in a disruption in the normal attitudes and beliefs about pro-environmental behaviours. From here, pro-environmental attitudes of family members changed and a new norm was established. Both

parents in family 5 agreed that once the new information was discussed there was a shift in what they felt was acceptable practice. Having their daughter point out that dumping rubbish down the back of the farm was a bad thing had an effect on their thinking, and as they described, *"it got on our conscience"*.

There had been a change in pro-environmental attitudes of several people spoken to for this research. However, the changes tended to be in family members as opposed to family units with the exception of family 5, where all members had a significant shift in attitude. Children who had a personal revelation about pro-environmental issues and behaviours showed the most sizeable move in attitudes and behaviours, while parents were more conservative in the amount of effective change. The limited attitudinal change in parents could be attributed to their pre-existing knowledge of environmental issues and the messages that were introduced by the children were consistent with the beliefs they already held.

Of the four families interviewed for the Clean Up NZ research, three were already practising pro-environmental behaviours. However, in families 3 and 4, the children had become interested in the activities they had learnt at school and wanted to know what was happening in their homes. The children's interest in the home recycling and composting, along with shopping suggestions, led to small changes in existing behaviours. For example, family 7, while they were already recycling, purchased a recycling station to make the process easier. They also changed some purchasing behaviours that saw them reusing packaging, and changed the way their child's lunch was packaged to avoid using plastics. Family 4 passed the responsibility of collecting and separating their own paper waste once they had finished using it, from the mother to the children.

For family 5, the key person to win over was the father. He was initially reluctant to adopt the new practices as suggested by his daughter. After 2 weeks of interpersonal communication between the mother and daughter, they stated, there was a change of attitude on his part, as a result of the upward communication.

Once this occurred, the focus was then on appealing to the father to engage in the behaviours. While he admitted to feeling guilty about the current practice of waste disposal, he was happy enough to continue with it:

*I suppose [participant 15] coming home from school saying this is how it should be done... I didn't want to squash a 9-year-old's enthusiasm. Between her and my wife they were on my back and I had no choice (parent, family 5)*

The communication continued until he agreed to assist in building an area where rubbish could be separated for recycling. He is now well versed about recycling practice and wider pro-environmental behaviours to the point, he stated, he would like to be more environmentally responsible around the farm. He identified areas around the farm that could be improved.

#### **4.3.5 Theme 4: Reciprocal influence**

The current study indicates there was several instances in each family where children spoke to their parents about what they were doing at school regarding the Clean Up NZ programme. It also shows that the children were influential in shifting the expectations of family members, which led to a change in their behaviours. This shift in expectation was considerable for family 5. Not only did the intervention see a turn around in the behaviours of the family, it also had a direct impact on two other families. The farm on which they live also employs two people who live on the property, with their families. These people also used to dispose of their waste inappropriately, but once the change occurred in the family there was an expectation that they would also use the new on-site recycling station.

The three pro-environmentally active families (families 4, 6 and 7) were less affected by the messages from Clean Up NZ. While there were small changes in

behaviour, there were two notable factors from the children's interpersonal communication about the messages. First, there was an appreciation from the parents that their children had developed an awareness and positive association with practices that they held as important. As the parents had been asking their children to perform household tasks, such as separating the rubbish for the recycling and disposing of food waste in the compost bin for a number of years, the Clean Up NZ intervention had helped the children develop their own understanding of the reasons behind the behaviours.

Second, all the children said they were comfortable talking to their parents about what they had learnt at school about Clean Up NZ. They were also happy to point out how the message could be applicable in the home. Conversations were held at the dinner table, on car journeys and in one-to-one situations. While the Clean Up NZ campaign had supplied independent influence on the children, the interpersonal communication also became an opportunity to develop knowledge for both the parents and the children. As the parents had developed knowledge about environmental issues they were able to expand on what the children had learnt. Where there was a lack of understanding or knowledge about a discussed issue, there was a willingness from all family members to seek out further information from expert sources, for example, which items can and can not be recycled.

#### **4.3.6 Theme 5: Civic participation**

While none of the families spoken to for this research indicated they had any association with pro-environmental groups, they all indicated they would be proactive in talking with people they know about pro-environmental behaviours. This includes family 5, who were recent adopters of pro-environmental behaviours. Participants commented that people who sent household waste to the landfill were, in their opinion, wasting resources:

*We were at friends for lunch the other day and I watched as they threw everything in the rubbish bin. I was appalled and said something to them but they said they couldn't be bothered with recycling (parent, family 7)*

The level of psychological involvement appeared quite high from all participants. This was suggested from the children's level of communication and attention to the Clean Up NZ messages and the willingness of the parents to reciprocate in communication. In addition, the attention given to the behaviours related to campaign messages and communication were high in all families, with the exception of family 7. It was particularly high in family 5, where the amount of communication and information seeking was high and the behaviour changes massive. Family 5 spent a large amount of time on the preparation of the recycling station and an entire morning on a trip to the local recycling depot. The family stated this time allowed them to interact socially with each other and that additional information was sought from external sources to assist in their new activities.

## **Chapter 5: Discussion**

### **5.1 Introduction**

The findings of the current study (as reported in Chapter 4) suggest that interpersonal communication among family members, after receiving messages sent through public communication campaigns, can have an influence on behaviour. This chapter will discuss these findings, in relation to the study's research question: How do public communication campaign messages impact on family interpersonal communication and behaviour?

The seven families examined for this study can be classified into two groups, either an upward (from children to parents) or downward (parents to children) flow of communication. The chapter will examine the communication and any corresponding behavioural outcomes as a result of message exposure. This section also considers how effective the model developed by McDevitt and Chaffee (2002) is when used to identify the relationship between family communication and behaviour through the five-stage process.

While this research had not considered external influences, it is recognised that other campaign sponsors such as friends, teachers, and celebrities may be more influential than parents. Research findings also indicate that school curriculum may have more bearing on the behaviour and values of younger people than parental influence (McDevitt & Chaffee, 2002). Successful strategies to motivate positive behaviour change may in fact lie within a person's social setting.

Public communication campaigns can be very effective at stimulating interpersonal communication (Valente, Poppe & Merritt, 1996). Family communication pattern literature shows assumptions about the downward influence from parents to children, or from the more educated spouse to the other (Jennings & Niemi, 1971).

Theorists believe that that the home is a place where reciprocal influence among family members affects the behaviours and cognitions of those members (Maccoby & Martin, 1983). McDevitt and Chaffee (2000) stated that the ability of family members to influence one another provides campaign communicators the ideal place to tap into. An intervention need not reach every member of a family as only one informed member can initiate a sequence of communication leading to influencing behaviours. Rimal and Flora (1998) commented on this phenomenon as campaign information modifying not just the pro-environmental behaviours of the adults and children but the impact the two groups have on each other. They add that campaign messages enabled each party in the family to influence one another's behaviour.

All but one of the participating families was engaged in pro-environmental behaviours before the communication intervention occurred. The pro-environmental behaviours considered in this research include recycling, composting and eco-friendly consumption (see section 4.3). Of these six families, all were recycling their waste, and four families composted. However, only one family considered the environmental impact of their consumption. The six families said that they had been active in these pro-environmental behaviours for a number of years before receiving the messages from the BCU or Clean Up NZ. The one remaining family had not been conducting any pro-environmental practices before the intervention of the PCC messages.

## **5.2 The role of communication activities**

Engaging at least one family member is critical for starting the communication process and changing behaviours. This is the same for any public communication campaign where one person is responsible for intervening on a group's behalf. McDevitt and Chaffee (2002) recognised this problem and stated: "From the perspective of the intervention planners, a key concern is whether involvement

varies in response to situational increases in stimulation, or whether involvement represents an enduring predisposition" (p. 11). The findings from this study suggest an activity is the most effective method of stimulating communication and the likelihood of a behaviour change from communication campaigns messages. When activities are absent, the opportunity for individuals to discuss campaign messages is limited. This is a particular problem in intergenerational communication between parents and children. Many programmes do not provide the shared learning or communication opportunities that may develop into direct and concrete influences on behaviour.

This is consistent with the findings of Ballantyne, Fein and Packer (2001), who concluded, after investigating intergenerational communication, campaign designers need to consider ways in which children could encourage discussion in the home about environmental issues. For example, they say programmes could be designed to include parents in homework activities and any necessary research. Without the parents' adoption of the concepts, the messages, and any new behaviours that may develop as a result, can be lost in the day-to-day activities of the family. The family can act to quash any new attitudes or behaviours that an individual may bring into the unit (McDevitt & Chaffee, 2002). Once the message alters the harmonic balance within the family, members will respond accordingly to readjust the equilibrium. The level of individual responsibility or commitment to the issue will be tested at this point. If a person has a solid connection to the issue, such as pro-environmental behaviours, the individual's response to the family's possible non-acceptance of the messages may see a change in the way the information is delivered to the family. The Big Clean Up messages were directed at adults, who in the context of this study were parents, and contained information on 'adult type' activities, such as car tuning and the use of public transport to and from work. While beneficial, the BCU messages did not contain exercises or activities that were specifically designed for parents to create interpersonal communication opportunities with their children and encourage changes in their behaviour.

### 5.3 Communication orientation

McLeod and Chaffee (1972) identified two dimensions of parent/child communication: socio-orientation and concept-orientation. In concept-oriented homes, where parents encourage children to express opinions freely, children are more likely to read newspapers, to gain knowledge and form opinions, and to take part in political discussion and campaigning (Chaffee, McLeod, & Wackman, 1973). In socio-oriented families, such outcomes are rare; parents stress deference and social harmony, encouraging the child not to bring up topics that might offend elders (McDevitt & Chaffee, 2002).

While this study did not determine the specific characteristics of families interviewed and their communication patterns, families 5, 6 and 7 all showed clear signs of being concept-orientated. For example, the open and free sharing of ideas and opinions, and parents encouraging children to develop their own points of view. Concept-orientated children are more inclined to interact with media and take part in discussions about issues. Theory suggests that concept-oriented families are more likely to engage more deeply with the messages of a campaign and therefore success is more likely to be found in this family type than that of a socio-orientated family (Fitzpatrick & Ritchie, 1994; McLeod & Chaffee, 1972).

This is not to say that the other participating families can be solely defined as socio-orientated, or concept-orientated, as no formal investigation was conducted. However, the families interviewed about their involvement in the BCU (families 1, 2 and 3) suggested a more socio-orientated form of communication. This is highlighted by the strong willingness of the children to accept and act out on the beliefs and behaviours determined by their parents. While it is possible for families to have more open communication for other issues (Ritchie & Fitzpatrick, 1990), where pro-environmental behaviours were concerned the parents generally directed their children's behaviour. This may occur for two reasons: first, it enables

the parents to establish patterns of behaviour that they believe are important for their children; second, as was found in this research, by establishing pro-environmental behaviours as family norms, the children are expected to participate in any work involved with acting out these behaviours, for example, carrying food waste to the compost.

Environmental issues are multi-dimensional and often complex in nature. This can create a barrier to confidently partaking in discussions and people may choose to avoid engaging with a discussion that may challenge their own efficacy. This can be a problem for interpersonal communication within lower socio-economic groups (McLeod & Chaffee, 1972). According to their research a child may not wish to enter a conversation with a parent who has previously reacted in a hostile manner to similar issues or discussions raised by the child. However, discussions may still take place between a child and his or her siblings.

Parenting style is typically conceptualised as describing a general emotional climate within the home. This emotional climate depends on where parents fall on general dimensions of parental emphasis, such as warmth, behavioural control, or psychological autonomy granting (Fletcher et al. 2000). Warm and responsive parents may differ in the specific manners in which they interact with their children, but all warm parents share an underlying emphasis on concern for and responsiveness to children's specific needs.

Fletcher et al. (2000) reported that parental warmth and reinforcement play important roles in promoting civic engagement in youth. However, the extent of parents' own involvement within their communities moderates these effects. When parents are inactive in the community, the researchers claimed, one would find strong contemporaneous associations between both parental warmth and reinforcement, and adolescent activity involvement. In such cases, parental warmth to younger children also predicts the children's community involvement as they get older. In contrast, in families high in civic participation, parental warmth and

reinforcement are contemporaneously associated with higher levels of child involvement. For example, parents with strong pro-environmental conviction who are pro-active in a community recycling programme will be positively receptive to their child's desire to also participate in the programme. From this conclusion it is possible to state parental warmth and reinforcement are predictive of a child becoming a willing and active participant in community focused actions.

#### **5.4 Upward communication**

Jeffery, McLellarn and Fox (1982) claim manufacturers and marketers have long known the influential power of children in the family's consumption behaviours. However, they continue, this view is not held by the parents themselves, who may tend to believe that they are impervious to children's influences.

While intergenerational influences were typically thought of as operating in one direction, from parents to children (Harwood & McKee, 2000), empirical research indicates children have a significant effect on their parents' behaviour (Bell & Harper, 1977). Recent models of socialisation have challenged earlier thinking that children's behaviour and attitudes are a reflection of their parents. Westholm (1999) stated children will adapt their own views on issues after an image of their parents' behaviours is developed. The influence of this independent attitude development was shown in the current research. For example, for one family participating in the Clean Up NZ programme, it can be clearly seen that the parents' knowledge and changes in family behaviour were driven from child-initiated discussion. Children, who participated in the Clean Up NZ programme, were motivated to such an extent by the teachings in the curriculum they introduced these messages in to their family.

Children who participated in this study may have been more attentive to the Clean Up NZ activities and messages than the other members of their class as their

families were already active in the behaviours the messages were conveying. This could also be stated for the adult participants of the BCU as six of the seven families interviewed for this research were already active in pro-environmental behaviours, as can be seen in Tables 4 and 5. Family 5's behaviour change (detailed in section 4.3.1) can be attributed to an upward flow of communication based on teaching that a child received at school. Campaign designers should consider this finding when developing public information campaigns, as it can be an effective means to achieving strategic behavioural outcome. It is difficult to state why a child, or any person for that matter, is attracted by one cause or issue over another. For example, a person could be passionate about animal welfare causes but not interested in environmental issues, but if a campaign is able to make a connection with the imagination of young people then, according to the present research, upward family communication may follow. This can be seen in the actions of the child in family 5 who initiated communication with her parents, based on information she had obtained through a communication campaign and from there a number of behavioural changes followed. It is in developing the relationship with the message receiver that campaign design is so critical.

In the context of this study, children are recognised as active social agents who play a role in shaping and influencing, not only their own learning, but also that of their parents. In a study conducted on environmental education programmes, results showed that 95 percent of students reported having learnt something from the programme. Another 32 percent indicated some change in behaviour as a result of that learning, and 82 percent of parents of the children involved in the study indicated they had observed some level of change in their children (Ballantyne, Connell, & Fien, 1998).

This study showed the BCU failed to initiate interpersonal communication within the families interviewed. However, Clean Up NZ was more successful in achieving this. McDevitt and Chaffee (2002) have highlighted the power of trickle-up communication flow, and Niemi and Junn (1998) showed the level of influence

school curriculum has on child development. Schools, they claimed, can make ideal training grounds for civic development.

The most significant behavioural outcomes from the communicated messages were found in family 5. It is here that the communication provided a clear illustration of how children can influence their parents' behaviours. Other interviewed children also made an impact on the everyday pro-environmental behaviours of their family, but at a less significant level than family 5. In families 4, 6 and 7, where pro-environmental behaviours were already practised, there tended to be adaptations to current behaviours rather than drastic changes or new behaviours adopted. For example, the recycling of more products, and children taking more personal responsibility for their pro-environmental behaviour. However, communication levels were similar among all the participating families. This suggests children may be effective in challenging family behaviour patterns and can act as catalysis to behaviour.

The openness of parents to accept the information their children share with them is important if the communication is to conclude with a change in behaviour. If the parents are willing to go beyond listening to what their children are saying, and actively assist the child, there is a greater likelihood of new information leading to enduring, family-wide behaviour change. Parents who are less inclined to accept new information from children are almost certain to ignore the messages and seek to restore the balance in the family to maintain the current behaviour. The reasons why parents block lifestyle-behaviour suggestions based on messages introduced by children are not fully known and would make for interesting further research.

The response of the campaign messages and subsequent intervention on family 5 spiralled into an upward flow of communication leading to a change in environmental behaviours. The process in which this family arrived at the behavioural outcomes could almost be defined as textbook; one member of the family received new messages that contrast with their current attitudes and

behaviours and acted as an intervention within the family. The interpersonal family communication then led to changes in behaviour.

While other families who had children participating in Clean Up NZ were able to demonstrate areas where communication between family members had facilitated either a change in attitude or behaviour, this was to a lesser degree than that of family 5. There were instances where the parent-child dyad saw adjustments in the behaviours of the parents. This is not to suggest that parents are not effective in developing behavioural patterns in their children, but this research showed that these patterns were already well established before the intervention of the BCU campaign, thus reducing the scope for improvement.

## **5.5 Downward communication**

There has been an assumption that until the age of 8 years of age children develop behaviour patterns through modelling and reinforcement of parents from which point friends and peers become more influential (Greenstein, 1965; Ellickson, Orlando, Joan, & Klein, 2004). While the ongoing influence of parents is challenged (Chaffee, Ward & Tipton, 1970), there is still a generally held view that parents take a dominant role in the development of attitudes toward civic responsibility in a child's early years. Foshee and Bauman (1992) went as far as to say that parents play a crucial role in defining normative behaviour in their children, and there is strong empirical evidence indicating parental values continuing to influence children's values well into adulthood (Alwin, Cohen & Newcomb, 1991). Some theory has suggested that the attitudes young people receive from their parents affect their subsequent behaviour (Ajzen, 1988). Because parents serve as important role models for their children, it stands to reason that parents who exhibit certain behaviours are likely to have children who also display similar tendencies. While there is limited research on a parent's effect on their children's pro-environmental behaviours, the strong link between children and parents' behaviour

is well documented. For example, parents who smoke are more likely to have children who smoke (Charlton & Blair, 1989).

It is possible for children and parents to act independently of one another's attitudes and behaviours. For example, a parent may hold strong pro-environmental attitudes and behaviours but his or her child may believe there is little purpose in acting positively toward the environment. On other hand, a young person may adopt healthy eating and exercise practices but their parent may hold the attitude that these behaviours are pointless. With regards to pro-environmental behaviours, research to date has laid a predominant emphasis on the influence of parents educating children in pro-environmental matters (Ballantyne et al. 2001). Where there has been a reciprocal influence on pro-environmental behaviours it has been regarded as incidental rather than deliberate.

This research cannot show any example of successful downward flows of communication. However, the results indicated, particularly where parents concerned, a seeking out of campaign information from both the message source (for example, requesting information from the ARC) and media sources (for example, newspapers and television). This find can be deemed encouraging for public communicators. Grunig's five communication objects, covered in section, 2.3, state the acceptance of cognitions as a legitimate outcome of a campaign. While this would not result in actual behaviour change, it is possible that further information and experiences will result in eventual pro-environmental behaviour changes. In the sample group used for this study, where all participants had prior pro-environmental experience, the results of the communication can be expected to have different outcomes than with a group of people who have not had any pro-environmental experiences. One would like to imagine that downward communication in the group who have limited or no pro-environmental experiences, would be frequent and information rich. This is a hypothesis worth exploring in future studies. The families, in which downward flow of communication was being examined, all stated that the campaign messages had limited effect on

engendering behaviour changes, but the messages further entrenched the receivers' attitudes toward pro-environmental behaviours.

Two of the three families participating in the BCU and who were interviewed for this research, had previously belonged to a pro-environmental organisation. While they are no longer active in these groups the influence of their participation in the pro-environmental group was sufficient that they continued acting pro-environmentally. Other families could detail a personal influence as to why they performed pro-environmental behaviours. This influence is consistent with the writing of Stern (2000) and Rajecki (1982) who claimed other people with direct experience with the environment or environmental issues have a lasting impact on participants' behaviour. This could provide an explanation to a significant finding of this research, which is that adult family members did not pass on information they had obtained through communication campaign messages.

It was evident in all of the BCU families interviewed for this research that the parents had already developed attitudes and behaviours regarding environmental actions, before receiving the messages from the BCU campaign. This was apparent not only from the verbal claims of all three families participating in the BCU who were spoken to for the study, but also because physical evidence of recycling and composting was present. This prior communication was not based on any messages that were sent from the BCU. The prior influences and experiences shown by the parents, as stated above, can provide an explanation as to how communication existed before the communication campaign messages were delivered. While this was the case, the desired message effect was already present despite one of the family registering to be part of the BCU. This action could make one consider why a person who already engages in pro-environmental behaviours would ask for information about pro-environmental behaviours. The answer could be as simple as people seeking a sense of security about their behaviour by seeking out others who perform similar actions. This behaviour can be explained by attribution theory, which helps explain people's actions and

motivations (Heider, 1957). Attribution theory is seen as very relevant to the study of a person's perceptions, event perceptions and attitude change, which can then lead to individuals impacting their own self-esteem, as well as their own levels of social anxiety. Heider specifically believed that people acted on the basis of their beliefs, and that their beliefs must be taken into account and reinforced. It did not matter whether their beliefs were accurate, valid, or based in reality; individuals would act based on their belief systems (Weiner, 1986).

Six of the seven families spoken to for this research said the person who introduced the initial messages into the family was female (two parents and four children). There is also a correlation between the length of a person's education and the extent of their knowledge about environmental issues. Of the families spoken to for this research, four parents had completed tertiary education while ten children were still in either primary or secondary education. Two demographic factors found to influence environmental attitude and pro-environmental behaviours are gender and level of education (Lehmann, 1999). Women, while having less environmental knowledge than men, have more of an emotional connection and show more concern for the environment. These findings by Lehmann are reflected in this study.

Levels of family communication about the campaign messages are the key to any level of behaviour change. The willingness of children to create discussions around the information they had acquired allowed for opportunities of learning for other members of the family. In contrast the parents from families 1 and 2 did not share the campaign messages with others in the family. However, indications in this study lean toward parents using messages they received through the campaigns to support existing beliefs and attitudes.

The role of fathers in the communication process was a finding of note. Two of the three fathers could be defined as indifferent to the activities and communication about environmental issues. Fathers did participate in pro-environmental activities

around the house when they were established, but they were significantly less inclined to drive or develop the issue through communication or practice in the family. This is not to suggest that fathers created barriers to the development of the child's attitude development or establishing new behaviours, in fact fathers were willing to assist their children if they were asked. Unfortunately, fathers were not always available (or did not make themselves available) to be interviewed for this research: only the fathers from family 3 for the BCU and family 5 for Clean Up NZ campaign were spoken with. The father from family 3 had a history of pro-environmental practice and also strong political ideologies about environmental issues. The father from family 5 had no previous pro-environmental experience but had been willing to change behaviour patterns to accommodate a new paradigm in the family and appeared to have an enthusiastic approach to the new practices.

The small amount of evidence to support family communication activity from the BCU participants is a somewhat surprising finding. The non-communication of campaign messages from the parents to children, or to spouses for that matter, requires further investigation. It has been hypothesised in this research that parents did not forward the messages to other family members because the messages only served to cement their current beliefs.

Research has shown that engaging with channels of communication on public issues, whether talking with others or using traditional media, is one of the most important elements in enhancing a person's community life (Fletcher, Elder & Mekos, 2000). Interpersonal interaction and discussion with other people on local issues leads to various types of community action (McLeod, Scheufele & Moy, 1999). Parental involvement in community activities is predictive of adolescent civic participation. Parents are shown to be a vital ingredient in participation of children and younger people. However, the extent of a parent's involvement reflects the levels of participation of children. When parents are actively involved with civic activities the children also enjoy high levels of participation. Lower

parental involvement in an activity, however, will see a drop in the level of children's participation (McLeod, Scheufele & Moy, 1999).

Participation in pro-environmental practices, in the sample studied, shows that these behaviours, once adopted, are likely to be retained. With regards to the BCU, families who were already performing pro-environmental actions before the intervention of the public communication campaign messages used the campaign to continue and endorse their current behaviours. Of the three families spoken to for this research two were active in pro-environmental activities outside the family. These actions support Conway's (1991) assertion that the higher the level of psychological involvement with the issue, the greater the number of activities in which the person will engage. Children fulfilling duties or chores around the family home, based on requests or orders from parents, appeared to arrive at a more favourable attitude toward the action than those who have first been made aware of the purpose and consequence of their pro-environmental behaviour.

## **5.6 The role of the five-step model in family communication**

The role of the family in communication has been under-researched and has even been wrongly dismissed as almost irrelevant to inquiry into how individuals' interest in events and issues is activated and maintained (Sligo, Massey & Lewis, 2003). It is difficult to state whether or not the model developed by McDevitt and Chaffee is an effective way to measure communication within a family. The model considers an individual's response to an intervention includes heightened civic involvement as manifest in increased interest and information seeking. It also looks at how resulting knowledge acquisition and opinion formation motivates interpersonal communication and change in family behaviour patterns.

Based on the current research it could be stated the McDevitt and Chaffee model acts more as a reflective measure once the communication has occurred than

something that can predict or anticipate specific campaign message outcomes. This argument is based on the complex nature and diversity of public information messages. In this study there was an opportunity for family communication to occur, especially where children act as an intervention (see 5.4). However, this would not always be the case. In public communication campaigns that require a more complex cognitive process (such as the decision to immunise children, or a decision where children may have little influence, for example, changing diet to comply with the recommended daily intake of fruits and vegetables) the amount of family communication would be significantly less. The model, based on the findings in this study, can not predetermine the behavioural outcomes of a family or the individuals that it may comprise. As a reflective tool, the model is useful to analysis where, if it does, the communication fails to engage family members in adopting new behaviours.

For example, a sign that children were complying with the first step of McDevitt and Chaffee's model was their interest in what was happening in their respective homes in relation to pro-environmental behaviours. This included the search for information of the family's pro-environmental practices around the home. This information gathering allows the child to evaluate where their family was positioned in relation to the new information they had received through the campaign messages. Another indicator of the compliance with the model was the relationship between curriculum exposure and the stimulation of children's attention to the news. The search for issue-related media increases when media content is used in interpersonal communication (Ettema & Kline, 1977). The model does highlight the complexities for communicators who are trying to use the family as a setting for civic development and engagement.

## **Chapter 6: Conclusions**

### **6.1 Introduction**

This study was a qualitative exploration into the effects on family behaviours, of messages sent through public communication campaigns. Based on the work of McDevitt and Chaffee (2002), this research utilised a five-step model of activation that followed interpersonal family communication from an initial message intervention through to families adopting new behaviours. To study this process, two public communication campaigns were used. The campaigns, which were pro-environmental in character, were the Auckland Regional Council's Big Clean Up and Clean Up New Zealand, a campaign developed by a trust of the same name. Both these organisations and their campaigns are detailed in sections 1.3.1 and 1.3.2. The aim of this research was to develop further understanding of the relationship between communication and behaviour, in a public communication campaign context.

The objectives were achieved in a number of ways. The study showed that downward communication flows, from parents to children, were more complicated to measure and investigate than upward communication flows, children to parents. While there was potential for effective interpersonal communication between family members in relation to messages sent from the campaigns, parents tended to retain the information content of the messages to themselves. Rather than develop new patterns of behaviour, the messages were more likely to endorse current attitudes and actions.

Contemporary theories of children and young people's development do not give enough weight to the influential role they have on parental behaviours (Lerner, 1978). Campaign designers need to recognise the growing sophistication of children and the increasing influence they have on their parents as they get older. An interactionist approach to pro-environmental messages suggests that child-

adult interaction affects both parties. If young people adopt new attitudes and behaviours, it is plausible that these new orientations will influence their parents.

## **6.2 Key findings**

### **6.2.1 Application of the five-stage sequence for family activation**

The conceptualisation of a five-stage process of family activation by McDevitt and Chaffee (2002) allows observers of family behaviour patterns to break down the stages of this process. While the model was originally developed to investigate family political communication, that is, how communication within the family leads to voting and other forms of participation outside of the home, this study has shown that this process can be adapted to explore the effectiveness of communication in issues other than politics.

This study found that the model is applicable to other forms of family communication where behavioural outcomes are affected. In this study the behavioural result was changing to act pro-environmentally. It was indicated in this research that family communication did affect behaviour and the five stages were a way of tracking the process of the communication. Jennings and Niemi (1971) have stated that family discussions are the key to achieving competence in behaviours such as paying attention to issues in the news, seeking further information to acquire knowledge, and expressing opinions. These are findings with which this present study can concur.

It is not possible to state whether the model would be successfully applied to all public communication campaigns, or any kind of communication campaign, for that matter. For example, communication that attempts to persuade receivers to change behaviours may take more of a cognitive process than that of a campaign

to try to motivate a mobile phone purchase. Family communication may not even come into play in an individual's consumption decisions.

### **6.2.2 Interpersonal family communication relating campaign messages**

This research is based on the question; to what extent, if at all, do messages from public communication campaigns stimulate interpersonal communication among family members? If so, how does this communication affect behaviour patterns within the family? The result can be stated that yes, public communication campaigns can engender family communication on campaign issues. However, the communication flows and outcomes differed to those which could have been initially hypothesised.

The results of this study can be examined by the direction of communication flow measurement, upward or downward, upward being from communication from child to parent and downward, communication flow from parent to child. The findings from these separate flows were significantly different in areas of style, frequency, location and motivation. Parents tended to keep information that was obtained from campaign messages to themselves, not even communicating them to their spouse, whereas children spoke about their new knowledge often and usually with a large amount of detail (see 4.3.3). Parents often already held beliefs and opinions about pro-environmental issues and had previously instilled these values into their children. The messages only endorsed what they already held to be true.

Parents had a lower level of enthusiasm toward the messages than the children. This difference in enthusiasm toward the message could be an indicator of the intention to discuss the topic with other people. For example, children who were excited about a pro-environmental project they were involved with at school may communicate these activities to their parents. However, parents who receive

messages containing information they already knew would be less inclined to discuss the topic further.

Upward communication flows provided more direct message/behaviour change outcomes from the group of participants in this study. This would suggest that children are capable of initiating change within a family group. Parents showed themselves to be willing listeners to the information the children brought into the home and did not want to be a barrier to the child acting out pro-environmental behaviours.

The role between communication and behaviour is a complex process. Many conflicting factors shape people's decisions and actions which in turn affect the way they behave. The enthusiasm toward the message and topic can be of significance when determining whether communication will follow. Those who have been exposed to the messages for a period time may develop fatigue toward the content of the message. However, new information may be motivating enough for the person to engage with the topic and go on to discuss the information with family members.

### **6.2.3 Intergenerational learning**

Literature on this topic implies a preference to focus on how adults influence children's learning and behaviour (Booth-Butherfield & Sidelinger, 1998;). This study shows children can be effective in not only stimulating communication within a family but also push the communication to behavioural outcomes. This is not to state parents are ineffective in determining a child's behaviour, as research, including this study, has shown this to be the case (Bell & Harper, 1977; Westholm, 1999). However, in relation to this study children were better at introducing messages from a campaign and stimulating communication based on the new information.

Based on the findings of this research it could be suggested that campaign designers need to consider how communication flow in families can affect behavioural outcomes when they develop their communication strategy. They should attempt to create opportunities for family members to partake in activities that stimulate discussion that could lead to a desired behaviour change. Furthermore, public information campaign communicators need to develop a better understanding of the nature of influences between children, younger people and their parents. In this study there are instances where campaign messages have been received by an individual however, the person did not communicate the information to other members of the family. When a communicator seeks to achieve a behavioural outcome, such as changes in pro-environmental behaviours, it would seem that the importance of having family members engage in discussion about the issue can not be underestimated.

### **6.3 Limitations**

This study was limited by two main factors. Firstly, only two public communication campaigns were studied. Secondly, the selection of participants was small. Both limitations are due to constraints of time and resources and will be further examined below.

#### **6.3.1 Number of Campaigns**

At any one time in New Zealand there are a number of public-oriented communication campaigns; these range from health matters to driver safety information. With an issue like the environment there are a number of agencies that are active in communicating messages to the public, possibly at the same time. For example, Greenpeace may be running a campaign targeting consumers

of fish, attempting to make them aware of depleting fish stocks and warning to make educated consumption decisions. This could be run in conjunction with a local authority communicating the importance of a roadside recycling programme.

In order to develop a clearer picture of the role campaign messages play in family communication and any effect on behavioural changes, more campaigns that deal with a number of pro-environmental behaviours may be needed. Using a number of campaigns could provide more variations and contrasts in communication and behavioural outcomes.

### **6.3.2 Selection and participation**

The participants for the study were possibly not representative of the population as a whole. For the Big Clean Up there were people who were predisposed to pro-environmental messages and held strong opinions about the issue. However, as the study participants were all relatively new members to the BCU programme, they all had similar understanding of the specific messages.

In relation to the Clean Up NZ campaign, the school used for participant selection, Carncot, was not indicative of the traditional school population. It is a private, single sex, well resourced school that could be considered to be attended by higher socio-economic students. As with the BCU, those who agreed to participate in the study may have done so because of an existing interest in environmental issues.

The number of participating families for both campaigns was low (BCU, n=3; Clean Up NZ, n=4). This limitation, however, was possibly offset by the depth of interviews that took place and the fact there were follow-up interviews. This provided insights into family communication and behaviour patterns which were unlikely to be obtained by questionnaires.

#### **6.4 Directions for further research**

This study has produced findings that could be of importance to practitioners focused on communicating public oriented messages. To build on this research it would be valuable for further study to sample a number of campaigns focusing on public information. Consideration could also be given to examining contrasting messages as this would help identify if different campaign messages have different effects on family communication, for example if messages pertaining to health benefits may have more impact on family communication than messages about driver behaviour.

Significant behavioural changes found in this current study could be attributed to upward flows of communication where children influenced parent's behaviours and this is an area that warrants further examination. While there have been a number of studies into children's influence on family communication, there is a gap where children may influence behavioural outcomes of their parents based on messages from communication campaigns.

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# Appendix 1

## Characteristics of research participants

	Age	Gender	Education	Campaign	Family
1	43	M	S	1	1
2	40	F	T	1	1
3	14	M	S	1	1
4	12	F	S	1	1
5	17	M	S	1	1
6	35	F	S	1	2
7	10	F	P	1	2
8	48	M	T	1	3
9	18	F	S	1	3
10	39	F	S	2	4
11	9	F	P	2	4
12	11	F	P	2	4
13	38	M	S	2	5
14	37	F	S	2	5
15	9	F	P	2	5
16	11	F	P	2	5
17	42	F	T	2	6
18	9	F	P	2	6
19	41	F	T	2	7
20	10	F	P	2	7

Note: P = primary, S = secondary and T = tertiary

## Appendix 2

### Interview guides:

### Big Clean Up Discussion Questions

#### Questions directed to all members of the family

- a) Who was the first family member to talk about Big Clean Up at home?
- b) Who was the person who registered with Big Clean Up?
- c) How have discussions with people outside of your family affected your conversations you have had with members of you family?
- d) Have you had any prior environmental experiences or actively belonged to an environmental group before joining Big Clean Up? i.e. Greenpeace, WWF, local beach clean up, recycling family rubbish, compost food waste
- e) How do you normally find information on environmental issues? i.e. newspapers, internet, magazines
- f) In which media have you seen information about:
  - I. The Clean Up New Zealand?
  - II. General pro-environmental behaviours?

#### Questions directed to the family member who initiated the intervention

- a) How did you become aware of Big Clean Up?
- b) Why did you want to be involved in Big Clean Up?
- c) Were you persuaded to join Big Clean Up from discussions you had with:
  - i. People who are not members of your family?
    1. Who were the people you spoke to?
    2. Why did their comments influence you?
  - ii. People who are members of your family?
  - iii. The information provided about Big Clean Up?
- d) What is the level of communication you have had, with members of your family, about Big Clean Up?
- e) What were the issues you discussed?
- f) Who has been the most active member of the family in initiating discussions around Big Clean Up?

**Questions directed to individuals within the family**

- a) Is your involvement in Big Clean Up your idea or did other people influence you into it? If influenced, then by who?
- b) How many conversations have you had about Big Clean Up with other members of your family?
- c) What were the issues you discussed?
- d) What was the most useful thing about any of the discussion?
- e) How long did these conversations go on for?
- f) Generally, where did these conversations take place?
- g) Who has been the most active member of the family in initiating discussions around Big Clean Up?
- h) If other members of your family were not interested in Big Clean Up would you continue with the program? Why?
- i) Has the discussions about Big Clean Up been started mostly by parents or children?
- j) After you held a discussion about a Big Clean Up issue did you have a better understanding of the issue?
- k) What influence do members of your family have over your activities in Big Clean Up?
- l) How comfortable do you feel talking about Big Clean Up issues with other members of your family?
- m) In your opinion, how does your level of understanding of the issues relating to Big Clean Up compare to the other members of your family?
- n) Has taking part in Big Clean Up made you behave in a more environmental friendly way?
- o) How much has your behaviour changed as a result of the conversations you have had with family members about Big Clean Up?
- p) What was it about the conversations that made you change your behaviour?

## **Clean Up New Zealand Discussion Questions**

### **Questions directed to all members of the family**

- a) Who was the first family member to talk about Clean Up NZ at home?
- b) Who was the person who registered with Clean Up NZ?
- c) How have discussions with people outside of your family affected your conversations you have had with members of you family?
- d) Have you had any prior environmental experiences or actively belonged to an environmental group before joining Clean Up NZ? i.e. Greenpeace, WWF, local beach clean up, recycling family rubbish, compost food waste
- e) How do you normally find information on environmental issues? i.e. newspapers, internet, magazines
- f) In which media have you seen information about:
  - III. The Clean Up New Zealand?
  - IV. General pro-environmental behaviours?

### **Questions directed to the family member who initiated the intervention**

- a) How did you become aware of Clean Up NZ?
- b) Why did you want to be involved in Clean Up NZ?
- c) Were you persuaded to join Clean Up NZ from discussions you had with:
  - i. People who are not members of your family?
    1. Who were the people you spoke to?
    2. Why did their comments influence you?
  - ii. People who are members of your family?
  - iii. The information provided about Clean Up NZ?
- d) What is the level of communication you have had, with members of your family, about Clean Up NZ?
- e) What were the issues you discussed?
- f) Who has been the most active member of the family in initiating discussions around Clean Up NZ?

### **Questions directed to individuals within the family**

- a) Is your involvement in Clean Up NZ your idea or did other people influence you into it? If influenced, then by who?
- b) How many conversations have you had about Clean Up NZ with other members of your family?
- c) What were the issues you discussed?
- d) What was the most useful thing about any of the discussion?
- e) How long did these conversations go on for?
- f) Generally, where did these conversations take place?
- g) Who has been the most active member of the family in initiating discussions around Clean Up NZ?
- h) If other members of your family were not interested in Clean Up NZ would you continue with the program? Why?
- i) Has the discussions about Clean Up NZ been started mostly by parents or children?
- j) After you held a discussion about a Clean Up NZ issue did you have a better understanding of the issue?
- k) What influence do members of your family have over your activities in Clean Up NZ?
- l) How comfortable do you feel talking about Clean Up NZ issues with other members of your family?
- m) In your opinion, how does your level of understanding of the issues relating to Clean Up NZ compare to the other members of your family?
- n) Has taking part in Clean Up NZ made you behave in a more environmental friendly way?
- o) How much has your behaviour changed as a result of the conversations you have had with family members about Clean Up NZ?
- p) What was it about the conversations that made you change your behaviour?