

Advancing public awareness

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John Pettigrew

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Preface

For many of us working as advocates of conservation there has been a struggle to understand whether our methods are worthwhile. Is the community becoming more conservation oriented? Are we, as a Department, having an effect? and if we are, what methods are most cost-effective in producing results? It was with these questions in mind that John Pettigrew was contracted to do research for the Department of Conservation to ascertain just what of our methods we might expect to produce the best advocacy results. On a "bang-for-buck" basis, what were the comparative impacts of various media used by the Public Awareness Unit in the Department?

As we might have expected though, there are no easy answers. As John's review of the research indicates, the effect we have can be determined by a host of factors, only one of which is the medium (TV, papers, etc.) used. We also need to consider the people presenting the ideas, their credibility, what type of communication methods they use, the content of the message and the target audience. Additionally, the type of effect we want may vary. We may try and address a knowledge gap by "agenda setting", bringing important topics to the attention of the public by, for example, using films on our threatened bird species. This has occurred through television using highly credible and expert Departmental staff as sources of experience and knowledge. However, we may also try to modify the attitudes of the wider community. As a Department we have already made headway with research work in this direction, and as John's work confirms, we need to start involving people by generating discussion, using dialogue rather than monologue and by generally providing members of the wider community with "real life" experiences which stimulate reflection and action in support of conservation in a country that prides itself on a "green image".

In a way, John Pettigrew's work throws the ball back into the court of the Department. We need to work out whether we are intending to fill a knowledge gap or stimulate attitude change and ultimately a change in behaviour. This will depend on the type of message we are communicating - whether we are dealing with issues like biodiversity, management of riparian strips, tree planting or soil conservation. Each issue will require decisions on the best medium to use, who and how communication will take place, what the content of the message is to be and who will be the target audience. It will only be when we reduce our task to specifics that monetary concerns will be able to be addressed. I hope that in reading this report you are able to sort out the specifics of your advocacy task and help us refine further the research questions to be addressed in the coming months.

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Abstract

The report surveys the literature on communications and public opinion change, the aim being to improve the media effectiveness of Department of Conservation (DoC) staff working in public awareness and publicity areas.

The impact of a public information message or campaign is affected by a large number of interacting factors. These include the effects of different media, the content and presentation of the message, psychological and demographic differences in the audience, and cultural values that differ by country or that change over time.

No general theory is available, and some of the research is ambiguous or contradictory. However, the literature does offer frameworks for thinking about the issues, and insights that can be used in the field.

Various recommendations are made. These include identifying the specific audiences and the customised messages most appropriate for a particular issue; devising the mix of media and interpersonal communication channels which best suit an individual issue; remaining flexible in the choice of media and in other decisions; and focusing on interactive media and dialogue with audiences.

1. Introduction

1.1 OBJECTIVES

The Department of Conservation must convey many different messages to the public through a variety of media. Inevitably, the funding to do so is limited. In order to use that funding most effectively, the question arises as to how to allocate resources amongst those media.

The question is complicated by the wide variety of media, and by the way in which people use them. Media ranges from the mass media such as newspapers, radio, and television, to leaflets, videos, signage, visitor centres, group visits, etc.

The use of the media includes paid advertising and specific campaigns, but also interviews, general background information, etc. Much of the public opinion literature focuses on the mass media.

The concept of media selection is well established in the advertising industry, where the placing of advertisements is a serious science. But generally speaking people do not have firm attitudes about toothpaste, or choose their friends on the basis of the car they buy, or feel that their choice of detergent impacts on the education of their grand-children. Changing public attitudes to social issues draws on the same research base as advertising and public relations, but its practice is probably harder.

This report attempts to summarise public opinion research in a way that is useful for DoC staff. Unfortunately, I have not found any easy answers - quite the reverse. The message from all sides is: Its more complicated than you thought, and there are no general theories.

I hope I have succeeded in an attempt to do four things. Firstly, to outline the major variables which have been found to impact on the persuasiveness of a media message. Secondly, to provide some mental frameworks, some concepts, and a language for talking about the issues. Thirdly, to provide some avenues for further exploration. And finally, to offer some comments of my own and some recommendations for staff to discuss.

1.2 APPLICABILITY OF FINDINGS

Most of the material in this report is based on American sources, because that is the main body of public opinion research in English. That is not surprising - the USA is a wealthy country, and the advertising and public relations sectors are active in both product marketing and in politics.

The US has an English-speaking culture that is similar to that of New Zealand. So, with reservations, we can apply the research here. Still, those reservations are quite important.

The American research offers concepts such as "agenda-setting" and "knowledge gap", which provide a structure and a vocabulary for asking questions and for making sense of the answers. These are useful as they stand.

Specific findings and generalisations are more tricky. Ideally, we should disregard anything that has not been confirmed as applicable here. However, I have found very little New Zealand (or Australian) research into public opinion processes. Polling of attitudes is quite common, as is political commentary, but neither are the same thing. So, in practice, we obviously need to be a little pragmatic.

Therefore the overview offered by this report should be seen as a jumping off point, with due regard for local peculiarities.

In particular, one of the obvious differences between the USA and New Zealand is that we are a much more homogenous society. We do not have their extremes of wealth or poverty, we do not have large minority language communities, virtually everyone is literate in English, and three or four newspapers plus three television channels provide the main news sources for the whole country. This must have an impact on the dynamics of public opinion.

Reference [85] suggests differences in broad cultural issues. It offers a scale of cultural differences between many countries, along four dimensions, and some notable differences can be seen between New Zealand and the United States; in fact between any country and any other.

So the research offers guidance rather than solutions. To my mind, this accentuates the need for flexibility and for effective feedback systems.

1.3 REFERENCES

Reference in square brackets [] are to articles cited in the bibliography. The bare citations, in number order and in author order, are in Appendix C. Appendix D includes my summary notes. This bibliography exists in a database format and is available on disk if desired.

With this report I have provided photocopies of those articles whose reference numbers are below [500]. I have tried to make these the more relevant and useful ones, although just browsing through their individual bibliographies shows how arbitrary that choice is. These are kept in a box in the main DoC library, Wellington, where they may be viewed.

While the gist of any article should come across in the report, I often refer to parts of it in different places. Reference to the article itself will usually offer a more coherent account of its argument.

In a few cases I have not been able to source the full text, and have included only an abstract. In some cases I have copied book reviews. These are listed in the bibliography under the author of the book, not the author of the review.

2. Conceptual structures

The fields of communications and public opinion cover a lot of ground, and any one piece of research nibbles away at a small piece of it, examining only a limited number of variables. We need some overall mental models to help us keep control of the big picture while looking at the details. Our focus is on communicating public affairs material with the greatest public impact, and three mental frameworks seem to me to be useful: the steps in the communications process, types of impact, and degrees of impact. (For present purposes a good enough definition of "impact" is changes in the attitude or behaviour of recipients of the message.)

2.1 THE FLOW OF COMMUNICATIONS

The "standard" communications model sees a message being transmitted from a source to a recipient via a medium.

I have used this as the underlying structure for this report, although I have separated the content of the message from its format. By "format" I refer to whether the message is presented dramatically or otherwise, on page 1 or page 5, and so on.

The main part of the report therefore looks in turn at the media, message content, message format, and the recipient. (Amongst "media" I include interpersonal communications as well as the technology-based media, but not experiential education.)

My concern is to see what characteristics of each of these variables impact on the "persuadability" of the message being sent.

Thus, to start with, we take the medium as the variable and find what has been said about the relative persuadability of various media. This was the task set by the terms of reference of this report, but it is clear on reading the material that we cannot stop there. There is very little we can say about one medium or another without qualifying it this way or that - this generality applies for certain types of message, that one varies with the recipients, and so on. "Other things being equal" doesn't apply. Everything is deeply intertwined.

So although I need to create categories to provide a structure, there are any number of cross-connections. An individual reference frequently emerges in several places when it sheds light on different aspects.

Towards the end of the report I suggest that the Message-*Medium-4Recipient model is deficient as a description of the process because the arrows all point one way, and I offer an alternative.

2.2 AGENDA-SETTING AND ATTITUDE MODIFICATION

Do the mass (or other) media change my priorities about what is an important issue and what is not, or do they change my actual views on an issue? This is one of the major themes running through the literature. A significant amount of effort has been made to determine under what conditions one or the other takes place. See [90] for a survey article.

This is the second conceptual framework underlying this report.

The agenda-setting role is when the discussion of a particular issue brings it to the forefront of public concern. The American Gallup Poll has fairly regularly since 1945 asked a sample of the population "What do you think is the most important problem facing this country today?". This tells an interesting story of the shifts of public attention over long periods. Specific studies (e.g., [7], [21], [88]) have attempted to discover what causes these shifts in the public agenda and also to tie in short-term agenda shifts resulting from public information campaigns or news-worthy events.

The agenda-setting function relates to the media's impact on whether a debate takes place on an issue. The media might also influence an actual change in people's knowledge of, and/or attitude towards an issue, i.e., the substance of that debate. So the latter is the other part of the media's potential impact.

In the literature this function has been termed "priming", but this does not have an immediately comprehensible meaning. I will use "attitude modification" or similar terms. In any case, the debate is not usually about one versus the other - most studies examine only one of these functions.

From our point of view of view, both agenda-setting and attitude modification are important, although not necessarily in relation to the same audiences or at the same time. It may be that agenda-setting is a more emotional response, whereas attitude modification comes about through more cerebral and information-based processes.

2.3 DEGREES OF IMPACT - LITTLE, MUCH, OR COMPLEX

The third underlying framework - more of an assumption really - is the degree to which the media have impact at all.

The discipline of mass communications research has gone through several stages of development. These revolve around different views as to the power of the media and, by implication, human psychology.

One view is that our behaviour is triggered by certain stimuli. In this view, the mass media is a scary and powerful entity, which can generate mass movements and change cultures - "omnipotent media brainwashing defenceless masses" [20].

Another view is that the media have very little effect compared with that of personal communications from friends, family, school, opinion leaders, etc. This view emphasises the personal processing we bring to media messages, and assumes the recipient to be essentially a rational being.

Both these views tend to a uni-directional view of life. Messages emerge out of the media, and we soak them up or we don't.

The modern body of opinion is that the whole business is much more complex than either of these views suggest, in that:

- "Public opinion" is partly a summation of a lot of individual opinions, but is also more than that. The expressed public view interacts in both directions with private opinions. Public opinion is a process, not a statistic.
- The reception of messages from the media by an individual involves an enormously complex web of interactions. It involves the individual's mindset, internal thought processing, external actions such as discussion and possibly behaviour change, and various forms of social control. It is partly rational and partly emotive. The process is mediated by characteristics of the message itself, of the medium, the source, the timing of the communication, and other factors.
- Some of the relationships are subtle, difficult to research, and unexpected or counter-intuitive. Although some general principles are available, they are subject to many ifs and buts, and many comments of the type "much more research is needed". There are rules of thumb, but no fundamental principles.

2.4 OVERALL PICTURE

The mental picture is that of a complex set of inter-relating feedback systems, the relative effect of which can vary widely with individuals and circumstances. To come to grips with it while remaining mentally stable we probably need to take little uni-directional bits at a time. At the same time we can't lose sight of the fact that each bit is part of and mediated by all the rest of it.

Several of the articles offer overall surveys of the mass communications and public opinion fields, and propose mental frameworks and structures. In particular, Beniger [78] and Lazarsfeld [79] describe the development of public opinion research, and various chapters from the Handbook of Communication Science [81] - by Pettegrew and Logan on health [82], Price and Roberts on public opinion [83], and Rogers and Story on campaigns [84] - all offer overall perspectives and useful bibliographies. An excellent practical guide is [96]. Although it addresses the health area, its advice is easily translated to conservation.

3. Media effects

3.1 BROADCAST VS PRINT - OPPORTUNITY TO RESPOND

How should we categorise the media? It is clear that there are significant differences between television, radio, newspapers, magazines, leaflets, video, film, and inter-personal communication. The problem is, little research is this fine-grained. Peter Wright [45] notes the difficulty of identifying the dimensions that differentiate one medium from another - all the familiar technologies are similar to each other in some ways, and different in others.

He looks to the reception environment as being the important variable. With television and radio the communication exists in time, it is ephemeral, its pace is controlled by the medium, and the recipient cannot easily refer to an archive. Print media exists in space, it is reasonably permanent, the pace is controlled by the recipient, and the stories can easily be referred back to.

He suggests that the print media make it easier for recipients to respond actively to the content of the message if they are moved to do so, but also make it easier to skip the message entirely - by turning the page - if it is of no interest. The broadcast media, on the other hand, offer little opportunity for an interested recipient to follow up on the message, but also - as they burble along at their own pace - make it more difficult to select messages. In other words, the print media magnify the effects of content-involvement; the broadcast media minimise it.

Wright calls earlier work of his own and other research [501], [502] suggesting that when we receive a communication, we respond to it internally by arguing in support or against, or by derogating the source. The greater involvement potential in the print media, then, allow greater rein for these processes.

Essentially, he argues that it is the content of the message which has the main impact on the recipient's involvement. ("Involvement", being the opposite of indifference - i.e., it can be positive or negative.) What happens next depends on the type of medium. If involvement is low, the broadcast media will have some effect, while a print message will be ignored. If involvement is high, a

print message will generate more response - that is, it will generate internal argument either in support of or against the message. See [33] also.

To oversimplify: If people don't care too much, they will be swayed by television and radio but not by print. If they are concerned, print will provide strong support for those who agree with the message, but will also set up stronger internal conflicts in those who do not agree with it.

So Wright notes that the real variable he studies is not so much the different media, as the opportunity for the recipient to respond. In this regard, interactive television is closer to print than to broadcast television.

3.2 MASS, QUASI-MASS, AND PERSONAL

Interpersonal communication is also a communication medium. Menzel [44] suggests a differentiation between the mass media and interpersonal communication, along the dimensions of standardisation, feedback, control, and others.

He suggests a third category - "quasi-mass communication" - which, he says, is seldom studied. Examples of these include political orators, luncheon speakers, missionaries, and specialised information centres. These are midway between the mass media and interpersonal communication in feedback, specialisation of the subject matter, and tailoring of the message.

This area is one where DoC and other organisations do a lot of work, so the lack of study is a problem. However, changes in technology are creating opportunities for communications to be more interactive and to be more accurately targeted, so the "mass media" are likely to take on more of the characteristics of this "quasi-mass". No doubt the research will follow. More of this in the conclusion.

3.3 MEDIA OWNERSHIP AND CONTROL

A strand of the literature argues the case of the media as a social and political force. Beniger [78] cites various studies in which news reporters, journalists, and intellectuals are seen to be actively shaping and framing public opinion, through their media influence. Ginsberg [24 - review] offers the thesis that public opinion, and by extension the state as a whole, is shaped by well-off and powerful citizens.

This argument probably does not shed much light on what we are trying to do here, except perhaps to underline the fact that the social and financial entities comprising mass media, as well as the journalists, commentators, writers etc. who work in the field, all have their own agendas which may or may not be congruent with the originators or the recipients of the messages they convey.

3.4 TELEVISION

Concern over various aspects of the impact of television has led to a substantial literature, and continuing debate about the strength of its influence.

Wade and Schramm [43] examined the mass media as sources of knowledge. The material is getting old, but suggests a movement from radio to television, with the proportion of information gained from the print media remaining static. In mid-60s America, at least, "Television is more likely to be the major source of public affairs information for people with little education, for females, non-whites, and farm and blue-collar workers than for others; whereas the print media are more likely to be the major source for the highly educated groups, whites, males, professional, managerial, and white-collar workers, and high-income groups, than for others."

They find that television is less effective than print in conveying accurate factual knowledge. The "great events that move through the mass media" have an impact, however, and the impact is across all those media. In examining the impact of Sputnik coverage on knowledge of science, they found that all the mass media contributed noticeably to knowledge. However they also found that the knowledge gained was less of the science itself than of the Cold War implications.

The impact of television is greater than newspapers when the subject is dramatic and the event short-term [71].

Viewers' comprehension of the main point of television stories is low [25], [42].

This is not to say that nothing useful is conveyed by television. Alper and Leidy [47] found that high school students did increase their knowledge of certain aspects of the US Constitution. Note, however, that the television programmes were designed and presented to impart information, and that they specifically sought audience participation.

Item [66] talks about Barbara Pyle, who produces environmental programmes for CNN. "Pyle has accomplished the nearly impossible: making environmental issues sexy enough for television. She does this by telling a story, finding a hero, pulling in viewers with appeals to human decency and compassion, and often skirting some of the facts."

It seems to be well accepted that the general run of television acts in an agenda-setting role rather than as a provider of information [90], [508].

"McCombs and Shaw's original hypotheses drawing on the belief that television is a uniquely powerful medium and the fact that its audience is inadvertent and especially large suggested that television may well be the critical agenda setter."
[7]

Mediating factors include whether the issue has tangible results for individuals or - something similar - whether the individuals are politically involved [3]. In both cases the agenda-setting role seems to be diminished.

In the area of investigative news reports, Protess et al. [26] suggest that the most effective in producing attitude change are those involving unambiguous presentations of non-recurring issues.

Their findings suggest that television is good at generating concern or outrage about a specific, identifiable problem where the solution can be seen as "Why don't they just ... [whatever]?". Conveying factual data or more complex situations requires the audience to be more reflective and analytical, which is congenial neither to the medium nor, apparently, to its predominant audience. The need for conflict and controversy (in all news media, not just television), leads to under-reporting of important but technically-oriented issues such as solid waste management [28].

Wade and Schramm [43] allow television a little more effectiveness in conveying information, suggesting "Tentatively, we can say that the public affairs, science, and health information to be learned from television is more closely related to events, more likely to capitalise on the present moment, than is the information to be obtained from newspapers and magazines, which can afford more perspective ... From the parade of events through television, which is the most vivid and dramatic carrier of events, we tend to fill in facts and findings, but to add concepts and understanding we are likely to turn to the slower print media which can somewhat more easily offer perspective and interpretation."

3.5 NEWSPAPERS AND MAGAZINES

Wade and Schramm [43], referred to above, found that factual information tended to be found from the print media rather than from television. Across educational level and gender, it was the print users who had the greater amount of information, and what they had was more specific.

They found that men tended to know more than women about science, while women knew more than men about health, and in each case the sex that knew more tended to get their information more from print than from television.

The particular strengths of print versus (in particular) television is a theme behind much of the research and will crop up frequently in this report. However, that issue might be less important than the issue of media versus personal contact (and less important again than that of all round complementarity).

3.6 SMALL MEDIA - LEAFLETS

As I mentioned above, most of the research on media effects seems to focus on the mass media, and particularly on the comparison between television and print. Some of the case studies show that large campaigns with substantial budgets still fail to make much of an impact.

At the same time, one simple leaflet has had a substantial impact for at least a decade.

The description of the "leaflet of Villejuif" [6] is worth reading in full. A typewritten leaflet, appearing in France in 1976, categorised a number of common food additives as "toxic and carcinogenic", "suspect", or "innocuous",

and identified food brands containing the additives. The additives were referred to by code name only, and the Villejuif cancer research hospital was (wrongly) cited as the source of the information.

The leaflet labelled some dangerous and unauthorised additives as innocuous. On the other hand the additive described as "the most dangerous" was E330 - citric acid.

After three years, nearly half of French housewives had read the leaflet. Penetration rates and acceptance were highest amongst women (presumably because of the child health implications), and amongst the wealthier and better educated. Few opinion leaders (teachers and doctors) checked the validity of the information, of those who did, most did so by discussion with colleagues rather than by referral to the supposed source.

The leaflet was widely reproduced in the press, and appeared in two books, including a primary school text. It was copied and distributed to mailboxes, shops, schools, and by public health nurses. Comprehension of the most dramatic warnings (about food brands popular with children, and E330 as a carcinogen) was high.

Overall, then, this very simple leaflet had a public opinion impact which, in any other area, would put the communications professional out of a job. Why was it so effective?

Firstly, food additives are a common area of concern. Secondly, the alleged source had high credibility - it was seen as both expert and disinterested. Thirdly was the "underground" effect - the leaflet was seen as being forced to be clandestine because it opposed a conspiracy of large and powerful corporations. Fourthly, the code names, although developed for clarity and efficiency, carried an aura of secrecy to those who were unfamiliar with them.

Perhaps the main message, although not emphasised by the author of the study, is that (to the extent that we are similar to the French) we believe what we want to. We readily accept evidence in favour of what we already believe to be the case, and do not easily accept evidence to the contrary.

The Villejuif leaflet shows the potential persuasive impact of an unassuming vehicle. It was perhaps a vehicle for person-to-person contact more than one for the dissemination of organisational information so, in that respect, was rather different from a printed leaflet. The implications for an organisation such as DoC are left as an exercise for the reader.

Given the above, one would think that a multi-million dollar information campaign, designed by Ogilvy and Mather, based on an eight-page brochure mailed to every household in the United States, and reinforced with targeted radio and television spots ... one would expect this to be effective. Yet Singer, Rogers, and Glassman (10) found just such a campaign (on AIDS) to be largely ineffective, in that the changes in knowledge that did take place were a continuation of trends before and after the campaign.

We can envisage several reasons for the difference between the two cases. Firstly, and perhaps most importantly, the AIDS campaign was part of an ongoing effort, presumably without dramatic surprises for the recipients. The Villejuif pamphlet, on the other hand, appeared to offer dramatic evidence of

official and commercial wrong-doing. The AIDS campaign was "official", the French pamphlet had some credibility advantage in being "underground", a rumour. Food additives are probably a wider topic of conversation than sexually transmitted diseases.

Finally, it may be fallacious to measure the effectiveness of the AIDS leaflet campaign in isolation from the overall climate of information. While the leaflet and its supporting media advertising seemed to have little impact, there was nevertheless a continuing trend line towards greater knowledge and some behaviour modification, to which we could assume the campaign contributed.

Items [56] and [64] offer examples of, respectively, a direct mail campaign and one using mass transit advertisements.

3.7 INTERPERSONAL COMMUNICATIONS

"Interpersonal communication" is generally taken as individual to individual discussion, but "quasi-mass" communication [44] might also be part of it. It's not necessarily "discussion" either - see (82) for some comments on body language in the health context. However, this is probably not an issue in the conservation area.

A couple of other general points:

Firstly, interpersonal communications differ from most other media in that they are interactive. They allow the recipient to modify the message, for example, to select topics of interest, and also allow the "internal argumentation" to become external argument.

Secondly, interpersonal communications about public issues work within social networks that have many other purposes as well. The mechanisms of diffusion that are of interest in looking at information campaigns are related to those studied by epidemiology, anthropology, innovation studies, history of religion, dissemination of rumours, etc.

Complementarity

While much mass media research seems to focus on the comparative influence of broadcast versus print media, discussions of interpersonal communications seem to place more emphasis on the complementarity of the various forms of communication.

Rogers and Storey [84] noted that campaign planners were increasingly using interpersonal channels to help in changing strongly held attitudes and in clinching decisions leading to overt behaviour change. Davison [74] refers to the interpersonal, organisational, and mass media systems complementing each other. Garramone and Atkin (15) found television helped generate discussion (but print to generate motivation to action).

Pettegrew and Logan [82] suggested that a feature of unsuccessful health campaigns was a failure to supplement mass media with interpersonal and intrapersonal reinforcement. Robinson and Levy [42] found that the quantity

and the quality of discussions about news stories increased people's understanding of the news - possibly having twice as much effect as did the amount of their exposure.

The role of interpersonal communications

Given that interpersonal discussion is important, how does it fit in with other media?

As noted above, it helps comprehension of mass media messages. The discussion of last night's news story or "soap" episode at morning tea refreshes our memory and possibly helps define our conceptual or social framework for the issue.

Rogers and Storey [84] saw interpersonal communications as drawing personal relevance from mass media messages, and providing a social context meaningful to the individual. The mass media disseminates information, awareness, and knowledge to large numbers of people, but it is the interpersonal channels which motivate people to act on that information.

The influence of the interpersonal channels arises from peer trust and from social control. Marijuana users amongst some US college students tend to seek information from other users; non-users and hard drug users get more of their information from professional sources [48], [49]. This suggests selective trust in one's peers - trust them if they have experience, but check with other sources if the stakes are high.

Vincent Price [75] discusses the role of social control in forming opinions. He proposes that news reports tend to emphasise conflict over issues, and therefore to polarise the debate and contextualise it in terms of opinion factions. This encourages those who are interested in the issue to identify themselves with one faction or another, and this group identification then feeds back into other issues.

The concept of the "spiral of silence" ([75], [78], [79], [83], [507]) takes this a step further.

Those with a minority opinion are persuaded by potential social disapproval to remain quiet about it, so some views become under-represented. In describing how she came upon the concept of the "spiral of silence" E Noelle-Neumann [507] quoted de Toqueville's analysis of the French revolution, during which "contempt for religion became a general and reigning passion."

"Those who retained their belief in the doctrines of the Church", says de Toqueville, "became afraid of being alone in their allegiance and, dreading isolation more than error, professed to share the opinion of only a part of the majority.

So what was in reality the opinion of only a part ... of the nation came to be regarded as the will of all and for this reason seemed irresistible, even to those who had given it this false appearance."

In examining pre-election opinion polls, Noelle-Neumann found that "those confident of victory speak up, while losers tend towards silence."

In the public information context, a person might be persuaded that agreeing with the "official" message (which within their group context might make them a minority) is naive, uncool, or showing oneself to be easily manipulated. On the other hand, once a threshold is reached, acceptance of the formerly minority position can appear to propagate very quickly, as under-expressed views are legitimised (e.g., passive smoking, gay rights).

Opinion leaders

The idea that some people in the community act as general opinion leaders has a long history. Weimann [62] cites some of the general discussions of opinion leadership, and notes that there have been several hundred studies seeking to identify the characteristics of opinion leaders. Dimensions include education, gender, social class, and personality traits such as conformity, social insecurity, responsibility, motivation, anxiety, and emotional stability.

A public information campaign might use "formal" opinion leaders - or at least, people who are reasonably obvious sources of information. As examples, the 1987 Look After Your Heart Campaign in the UK [36] used health education officers, community dietitians, and environmental health officers to support informational media. A cholestrol programme in the USA [40] enrolled 60,000 physicians in support of its campaign.

Rogers and Storey [84] also cite several examples of successful campaigns using trained opinion leaders. Tanzania's Mtu ni Afya ("Man is Health") project of 1973 trained 75,000 discussion leaders to help groups of 12-15 discuss weekly radio broadcasts. The Stanford Heart Disease Prevention Program used health promoters as opinion leaders, behavioural models, and recruiters. Lay leaders were used in a Finnish health education project, and an Iran family planning campaign (see various citations [84 p 837]).

These more or less formal opinion leaders - specifically identified or trained as part of the campaign - shade off into informal activists and information sources, where the campaign takes advantage of groups and networks already in existence. Or even where the "group" is implicit until brought together by an activist - Neighbourhood Watch groups - for instance, arise more or less spontaneously but then have access to information and resources.

Weimann [62] notes that the concept of opinion leadership is based on a leader-follower dichotomy. A network model, on the other hand, sees individuals as nodes, all of us connected with lines of influence. Some have more connections, some have fewer. And the connections vary in accordance with expertise or other factors - a fellow who works in the security industry initiated our local Neighbourhood Watch group, but is not a "community leader" in other areas.

So like many of the other areas in this report, "opinion leadership" started as a simple model but is being recognised as more complex - a continuous variable of influence rather than the original two-step model (mass media / opinion leader).

Indeed, one writer [35] raises the possibility that opinion "followers" might just be those who respond more slowly to the mass media. That is not a mainstream view, but it does raise the issue that individuals vary widely in the rate at which they respond to information.

4. Message contents effects

Most of the public opinion literature examines messages that have been deliberately created. However, every action sends a message. One of the important messages of management writer Tom Peters is that the formal messages (a mission statement, for example) don't have nearly the impact of the accumulation of day-to-day actions. By analogy, DoC's actions and explanations about something that excites the public interest (whales, horses, the Queen's chain) accumulate to become the message about "what DoC is on about".

4.1 ISSUES

The macro level of message content is the choice of the issue itself, and this is closely involved with agenda-setting studies.

Neumann [7] considers various types of issue. His study involved taking ten issues of concern and comparing media attention to those issues with Gallup survey data on "the most important problem facing this country [USA] today".

Neumann offers a life cycle and a typology. A public issue, he suggests (from Downs [511]), starts as a pre-problem, which exists but has not yet captured public attention. During the discovery phase there is a sudden steep ascent of attention and a transition from non-problem to problem. There may be a euphoric enthusiasm to "do something effective". In the plateau stage the complexities of the problem start to become realised, with perhaps an understanding that solutions could be slow and difficult. The enthusiasm and sense of drama wane, the public becomes bored, frustrated, or saturated, leading to the decline phase. In the last, post-problem, phase, the problem still exists but receives no media or public attention. (The issues he chose do not invite the possibility of being resolved one way or another, but this is obviously an outcome in some cases.)

Alongside this life-cycle, he suggests four categories of issue. A crisis has a real-world life cycle that might correspond with the attention cycle above, with a clearcut "plot", high attention peaks, and high media coverage. The Vietnam war, urban riots, and the energy crisis could be examples.

A symbolic crisis (drugs, pollution, poverty) is an ongoing problem, but gets defined as a crisis for a limited time. These tend to have middling attention peaks, and fairly high media coverage and public attention. In both the crisis and symbolic crisis, media attention and the degree of public concern tend to track each other.

Problems (inflation, unemployment) have periodic crises and the highest degree of public concern of the issues in this study, but they generate low media coverage. Non-problems (crime is the only example in the study) are enduring social concerns, occasionally have low peaks of public attention and have fairly steady media coverage. The changes in media coverage and in the level of public concern have little relationship with one another.

Neumann extends his analysis to look at the relationship between media attention and public concern in the United States. Given a unit increase in media coverage, what is the corresponding increase of public attention?

He tends towards the assumption that media coverage causes public concern, although he also suggests that the media and the public are each, more or less independently, reacting to the real world. In any case his basic concern is with the shape and slope of the correlation graph. (Behr and Iyengar [21] suggest that there is little feedback from the public to the media - journalists' choice of story themes is not significantly based on public concern. Reference [28] offers an example of an issue under-represented because it lacks excitement.)

To the extent that media coverage generates *public concern, stories about "symbolic crises" (which in Neumann's study include pollution) have little impact, stories about "non-problems" have no impact, but coverage of "problems" have a very great impact indeed.

Proress *et al.* [26] divide issues into "recurring" versus "breakthrough". The recurring issues (crime, government waste, corporate windfall profits) are "regulars", and receive fairly consistent treatment from the media. Unique "breakthrough" events come fresh to the public's attention, and have more impact.

There are a few issues here. The first is, of course, whether the typology, the process, or the conclusions are transferable to New Zealand.

On the assumption that at worst they form a useful framework for thinking, then a second question is: Under what headings fall the issues of concern to DoC? It might be a useful exercise to classify the issues faced by DoC, using this typology, and to see how well the classification predicted the life-cycle of issues as they were handled by the media.

My third comment is to offer a synchronism or resonant frequency model. I recently watched a ten-year-old play a cycle race video game. You twirl the joystick in a circle to make the cyclist's legs twirl faster. But the relationship between the joystick and the cyclist is subtle, non-linear, and hard to judge. Twirl the joystick slightly slower or faster than the cyclist, and the cyclist responds. Work the joystick at any speed outside a narrow correlation with the cyclist's existing efforts (which are constantly changing, of course), and the synchronism totally breaks down; the energy transfer drops right away. In the real world the cyclist - the public - has its own agendas, but the task of the joystick twirler is still to keep just so far ahead, to keep the energy transfer happening.

At the micro level, a few things can be said about what sort of messages tend to be persuasive.

4.2 ACCURACY OF CONTENT

Firstly, whether the content is "true" is probably irrelevant.

Kepplinger and Roth [92] used similar methods to Neumann's, above, to demonstrate a case of the German mass media creating an oil supply crisis in

1973/4. In this case people hoarding oil products as a result of initial news stories (based on superficial and incorrect assumptions) created short-term supply difficulties which were in turn seen and used as reinforcing evidence of a crisis.

A more dramatic case is that of the French food additives leaflet [6], which I discussed in (3.6.).

Both cases saw large-scale acceptance of a message that was clearly inaccurate even by evidence available at the time.

4.3 CONTENT AND COMPREHENSION

An equally sobering conclusion is that content has little impact on comprehension, at least of television news. Robinson, Levy et al. studied the comprehension of television news by viewers in Great Britain and the United States. See [42] for their article, [25] for a review of their book. Viewers comprehended the main point of about a third of stories broadcast, and this varied little with story content (it did vary somewhat with education).

Broadcast media tend to be more pervasive than print, for two reasons. Firstly, the medium controls the pace and order of presentation, and secondly withdrawing from a radio or television programme a more deliberate act than putting aside the newspaper, possibly to read it later [45]. It is possible that viewers let two-thirds of news stories just wash over them, so they pick up on and comprehend only the one third they are actually interested in. Reference [16] studies aspects of selective exposure to communication as a strategy for coping with information overload. Two suggestions (although referring to entertainment programmes rather than news), are that viewers seek old and familiar messages, and that they select entertainment items for their value in morning tea discussions.

The value of news items as "coins of social exchange" comes across strongly in reference [42]. Comprehension was much higher when news stories had been discussed with others, although this may say as much about a viewer's education and interest in the subject as it does about the content of the message itself. Genova and Greenberg [97] found that interest in the news had more impact on knowledge gain than did education or socio-economic status.

4.4 RELYING ON CELEBRITY ENDORSEMENTS

A current hair shampoo advertisement uses a celebrity endorsement to warn us against celebrity endorsements. Nevertheless (or perhaps because) celebrity news can be persuasive. President Reagan's colon cancer episode of July 1985 led to a sharp, although transitory, increase in public interest in colorectal cancer [8]. It also led to changes in behaviour, with a four-fold increase in phone enquiries for one month and an elevated level of enquiries for a year. There is also some evidence of increased use of diagnostic procedures, although false reporting by doctors (claiming on a similar but more expensive procedure) blurs the statistics. Increases in the awareness of breast cancer have been noted following episodes involving three Presidents' wives.

4.5 RATIONAL ARGUMENT

What about the strength of arguments rationally presented? This interacts closely with the characteristics of the recipient and of the source. Petty and Cacioppo [17] define "central" (rationally processed) versus "peripheral" (other) routes to attitude change, and conclude that rational arguments tend to be persuasive for people who have firstly the ability and secondly the motivation to think them through. The persistence of attitude change over time, resistance to counter-propaganda, and consistency of attitudes all tend to be greater with the "central" (rational) route.

Costanzo *et al.* [89] note that people fail to take into account all the relevant information in making a decision, and instead use a simplified "folk model" that skips the more subtle (but often important) factors.

Presentation of evidence for an appeal makes little difference if the credibility of the source is high; if its credibility is low, then presentation of evidence improves the case only if the evidence is unfamiliar to the audience [50].

The content of the message interacts with the medium that conveys it. Print offers more to the specific, in-depth, rational argument, while the broadcast media offer dramatic impact [43]. Ideally, one would attempt to hit both bases, but specific issues may be best suited to one medium or another.

Davison (review in [74]) looked at an inner-city community and found that the more specialised the subject, the more the information was disseminated by personal or organisational channels rather than the mass media.

In the end, the "content" of a message is a slippery concept. Attempting to decide what is the content of any particular message is fraught with peril and requires to be qualified in terms of intended (or unintended) audiences. The interaction of the message content with the recipient is a rich area (see the "Recipient" section), but essentially it is the internal processes of the recipient which determine what the "content" of a message actually is, regardless of the intentions of the communicator. When the cattle rustler is hanged, is that a message about crime doesn't pay, or about violence as conflict resolution?

5. Message format effects

The format of the message includes such variables as emotional level, personally relevant versus abstract, positioning (front-page or non-lead item), frequency (of presentation), and source effects (credibility and persuasiveness of the presenter or writer).

5.1 DRAMATIC AND EMOTIONAL PRESENTATION

A theme that comes through time and again is the relatively strong initial impact of the heart compared with the mind. As mentioned earlier, Petty and Cacioppo [17] discuss various conditions under which people process a complex argument - when they are well-informed, understand the issue, are undistracted, familiar with the argument, are forewarned of the appeal, and have a personal involvement. They suggest that the appeal to rationality is more powerful and longer-lasting, but not that it is easier.

Research on the effectiveness of the broadcast media certainly suggests that lively, entertaining, and/or dramatic material succeeds best. Mendelsohn [11] cites the use of an animated film in a drunk-driving campaign, and a soap opera specifically written to target low-literacy Mexican-Americans in Los Angeles. Pross *et al.* [26] and [71], in comparing the impact of a series of investigative news stories, concluded that public attitudes were more likely to change where the issue was portrayed in an unequivocal way with dramatic, convincing, and clear evidence, identifiable villains and victims, and actual rather than potential harm. Obvious remedial action helped too.

Alper and Leidy [47] showed that dramatised TV snippets (presenting issues relating to the US Constitution) were effective in changing both attitudes and knowledge of US high school students, although admittedly not by a great deal.

5.2 PERSONAL RELEVANCE

Partly related to this is the degree to which the material is abstract or, on the other hand, personally involving. According to an abstract of an article in *Health Affairs* [39], the Harvard Alcohol Project found that messages should communicate incentives or benefits, and should draw attention to immediate, high-probability consequences of behaviour.

Rogers and Storey in "Communication Campaigns" [84], a chapter in "A Handbook of Communication Science" [81], discuss the Cincinnatti United Nations Campaign as an abstract, general appeal ("Peace Begins with United Nations - and the United Nations Begins with You"), which had little effect. They quote Star and Hughes [500], who evaluated this campaign: "Information grows interesting when it is functional, that is, when it is so presented that it is seen to impinge on one's personal concerns."

As a generalisation, Rogers and Story suggest that campaign appeals that are socially distant from the audience member are not effective. Family planning campaigns that emphasise population pressure, national food imports, and strains on the education system are less effective than those emphasising effects on one's quality of life. Successful campaigns for crime prevention have been based on personal vulnerability. And, "a successful energy conservation campaign must hit audience members close to home, rather than just using statements by a national leader that the energy crisis is the 'moral equivalent of war'".

Taking this a step further, these authors suggest that the personal consequences used in the appeal are more effective when positive than negative. "Campaigns promoting preventative ideas are not likely to be successful unless special communication strategies are utilised to reinforce or create a perception of more immediate rewards for adoption. ... The nature of preventative ideas means that rewards for their adoption and use are often delayed, uncertain, and weak; the locus of benefit may not be clearly perceived to be oneself."

5.3 POSITIONING

In determining the impact of television news reports on agenda-setting, Behr and Iyengar [21] noted that lead stories had a significant effect, non-lead stories didn't. On the other hand, one of the three topics they studied (unemployment - also the least covered issue) showed no agenda-setting by the lead stories either.

They suggest three possible reasons for the effectiveness of the lead story. Firstly, it signals the networks' evaluation of it as the most important story of the newscast. Secondly, viewer attentiveness may decline during the broadcast. Thirdly, arguments presented earlier tend to be more persuasive than those presented later. Two health campaigns in, respectively, the UK [36] and the US [37] show upfront positioning in a different medium. Both cases used supermarket point of sale material as part of the mix.

5.4 FREQUENCY

Beyr and Iyengar [21] found some relationship between frequency of exposure and agenda-setting impact. Robinson and Levy [42] and Wade and Schramm [43] looked at the correlation between frequency of exposure and knowledge or comprehension.

Wade and Schramm found that knowledge improved with increased reading, but not with increased viewing. Robinson and Levy found some correlation between the amount of exposure to news sources (broadcast and print) and increases in comprehension. Both groups noted the possible connection with higher levels of education - perhaps better educated people had increased exposure to particular topics because they were specifically looking for information.

On the other hand, Zukin and Snyder [69] found unambiguous evidence of passive learning from television exposure. While the knowledge in this case was fairly superficial, being the names of local political candidates, it was, nevertheless, picked up without conscious effort.

It seems then that repetition works, except for either a relatively complex message or a very trivial one (an advertisement - [98]) conveyed on television. In the first case, the repetition does not counteract the fundamental disadvantage that television has when presenting a more complex message, and in the second case the audience gets tired of it.

Winter and Eyal [87] suggest that cumulative impact over time is less important than the elapsed time since the last hearing of the message - it is recent emphasis rather than repetition that has the main agenda-setting effect.

5.5 SOURCE CREDIBILITY

In reference [50], the authors note that credibility has two components: expertise - they know what they are talking about; and trustworthiness - they tell it straight. They go on to offer a comprehensive analysis of the effects of source credibility and its interaction with other variables.

Essentially, if an argument is less than fully persuasive, then a credible source can help to fill the gap. If the source has low credibility, then many other variables have a significant effect on persuasiveness. If because of other factors the argument is already being well received, then the credibility of the source makes little difference.

Time effects

The initial difference in persuasiveness between a high and a low credibility source decays with time, so it is possible that credibility makes little difference to longer-term impact (days to weeks).

Whether the source is mentioned before or after the argument makes a difference. A high-credibility source cited early seems to be the most persuasive. If the source is of low credibility, it is more effective if identified later.

Interaction with the message

Several aspects of the message itself - discrepancy, threat, incongruity, and evidence - interact with source credibility.

Credibility becomes an issue only when the message is highly different from our existing beliefs. Where the message is moderately or only slightly discrepant, then the high and low credibility sources have a more or less similar impact.

Threat can be experienced in terms of material consequences or as social disapproval. Where credibility is high, increasing physical or social threat is more persuasive; where credibility is low the threat is less effective and in fact less persuasive than a neutral message.

Messages tend to be more persuasive where they are seen to be incongruous with the source's interests or past behaviour. A high-credibility source, however, has an advantage only where the appeal is seen to be of advantage to the source, and where the source is not a convert to the point of view being presented. High and low credibility sources have about equal impact where incongruity is already reinforcing the message.

A two-sided appeal can be more persuasive provided that the unfavourable side is presented first, is compellingly refuted, and cites only already known opposition arguments.

The presentation of evidence, as long as it is unfamiliar to the audience, enhances the influence of a low-credibility source but has little impact on a high credibility source.

Interaction with the recipient

Three factors relate source credibility to characteristics of the individual recipient - locus of control, authoritarianism, and involvement.

People with an external locus of control perceive the world in terms of chance, fate, or powerful others. They tend to be more easily influenced, and for them a high credibility source is more persuasive than a low-credibility source. Those who attribute greater influence to their own actions are less influenced overall, and source credibility makes no difference.

Highly authoritarian people seem to be more easily persuaded, and there is ambiguity about the interaction of this with source credibility. The authors suggest that low authoritarian people have a higher tolerance for ambiguity, and will evaluate the message on the basis of multiple cues from both the message and the source. Highly authoritarian people will avoid ambiguity by judging source credibility when the arguments are either sparse or very complex, and by judging the arguments where these are more accessible.

Having a strong involvement with the issue appears to interact with credibility effects, but the evidence is ambiguous.

The authors offer two situations in which low credibility sources might possibly be more persuasive - where the audience's initial opinion is important, and where an individual's own behaviour feeds back into their attitude. However the effects seem to be weak and the evidence ambiguous.

Internal processing

To bring some order to this raft of observations, the authors examine two theories - cognitive response and attribution.

Cognitive response proposes that we respond to a message by processing cues in the light of our initial opinions and attributes. A high credibility source that we disagree with, for example, may trigger internal counter-arguments. The complexity of this internal "dialogue" gives rise to the complexity of responses in the real world.

Attribution theory suggests that we know our attitudes by observing our own behaviour. If we act in a way advocated by a low-credibility source, we will believe that we have made a decision for ourselves, and will consolidate our preconceptions.

6. Recipient effects

The end result and the objective of a communication is the result it has on changing an individual's behaviour. There are two aspects to this. Firstly, what sort of internal processing happens between hearing or seeing a message, and acting on it? Secondly, are there generalised individual differences which impact on the way we respond?

6.1 INTERNAL PROCESSING

Elihu Katz [79] cites a number of studies which look at the audience's "decoding" of messages, a process by which the viewer enters into a "negotiation" with the message. This may be conscious or unconscious, but is affected by many variables, including the strength and direction of the individual's existing beliefs.

A background assumption in considering these internal processes is, how rational do we assume people to be? David Sears [17] suggests, quite a lot: "... contemporary social psychology ... emphasises the rational and cognitive at the expense of the irrational and affective ...". On (more or less) the other hand Robinson and Kahout [18] found that "the overwhelming majority of the general public believes most of what it hears, sees, or reads in the nation's press."

Vincent Price [75] looks at the impact of social groups on an individual's opinion formation. The news media, he suggests, polarises an issue and defines it in terms of group conflict. Individuals' opinions help to define the social groups that they belong to and, in turn, their opinions are influenced by "... the use of group membership to determine and express their opinion on an issue..". This mechanism provides a ready opportunity for audiences to respond to issues primarily as members of groups rather than as individuals.

For present purposes, the debate over what internal processes go on is probably useful only as a reminder that the communication still has some way to go after the message has been broadcast or printed, or indeed after it has been seen or heard. More relevant are some of the recipient variables that impact on the degree to which recipients are persuaded by a message.

6.2 PSYCHOLOGICAL VARIABLES

Several psychological variables are discussed in [50], in the context of source credibility (see the credibility section). A person with an external locus of control (the degree to which they are "in control of their life") or who are more authoritarian are likely to tend to have a lower tolerance for ambiguity and are likely to be influenced by source credibility rather than by an examination of the arguments, especially where the issue is a complex one.

An interesting aspect is the evidence that our past behaviour is an input into our present opinions - we like to appear consistent to ourselves.

A cautionary sidelight is offered by Davison [68] who briefly explored the "third person effect" - the tendency to feel that a message is more effective in persuading other people than it actually is, and perhaps that it persuades other people but I am too smart for that. In a shortage, people rush to stock up in order to beat the hoarders.

6.3 DEMOGRAPHIC VARIABLES

The main demographic variables to have an effect on persuadability are socio-economic status, education, age, sex and, to some extent, race. One problem is that these are frequently clustered - education and socio-economic status, for instance, are usually closely related, and it can be difficult to isolate one from another. Of course for our pragmatic purposes this may not matter, as long as they remain connected.

Sex

Shapiro and Mahajan [72] offer some interesting insights into gender differences in people's attitudes to various issues. Other writers ([18], [42], [43] - see below) find gender differences in the use of various media, and in topics of concern. It adds up to a strong argument for considering different strategies in communicating to men and to women, although this area in particular is likely to be one where the New Zealand experience is substantially different from that in the USA or elsewhere.

Shapiro and Mahajan found that men tended to be more force-tolerant on such issues as gun control, defence expenditure, and capital punishment. Women tended to be more compassion-oriented on such issues as social welfare spending, education, and unemployment. Women tended to be more supportive of specific regulations in such fields as nuclear power plants, vehicle speed limits, and cigarette advertising. Women tended to be more supportive of restrictions on Communists, atheists, and abortions.

Women's "Don't know" responses declined over the period of study. The authors offer several possible reasons for this - the issues may have become more relevant, women may have been taking more notice of them, or women may have felt more confident about expressing opinions.

The authors comment "...it is uncertain whether men and women systematically organise their political views and policy choices in the same way, if at all..."

Shapiro and Mahajan's research used national surveys up to 1983, so apart from the country differences there will surely have been some changes in the last decade. Perhaps it calls for some work to see what is happening here.

The authors offer a useful bibliography, although all are American sources.

Various demographics

A number of studies look at demographic variables in various combinations, in the context of various types of impact. I will briefly summarise their conclusions.

Hill [20], in what appears to be a rather weak study, found educational level to be a strong predictor of agenda-setting impact. He suggests that variables affecting comprehension and recall may also affect agenda-setting.

Robinson and Kahout [18] found in their study of believability and the press that demographics generally had little impact, with the exception that women were consistently more willing to believe the news media.

In investigating people's sources of public affairs, science, and health knowledge, Wade and Schramm [43] found television to be the major source of public affairs information for the less educated, females, non-whites, and farm and blue-collar workers. The print media tended to be the main source of public affairs information for the better educated, whites, males, professional, managerial, and white-collar workers, and high-income groups. However, women were likely to read about health issues than were men, and the authors comment that the sex which was expected to know more about the subject tended to make more use of print.

Gabriel Weimann [62] found opinion leadership to be stronger in the higher socio-economic groups, males, and in the 30-39 age group.

6.4 THE "KNOWLEDGE GAP"

Robinson and Levy [42] found education to be the single most important predictor of news comprehension. The impact of education (and the likelihood that the better educated are likely to be more interested in many topics) is also seen in the concept of the "knowledge gap". Tichenor *et al.* [63] suggest that the better educated learn more than the less educated, because the former are more likely to have better comprehension and wider social contacts. They may be aware of the issue at an earlier stage, be better able to select and retain information, and be more likely to use the print media.

Thus the theory says that because the better educated tend to learn more about any issue, the gap in knowledge never closes.

However Moore [73] suggests that the "gap" might be just a time lag. The better educated learn faster initially, but given time lower-status groups catch up (as long as the information keeps coming).

Several writers consider personal relevance, interest, and motivation. The Cincinnati United Nations campaign had some impact on better educated younger men [63], but failed to have a wider impact [84] because the issues were abstract and not seen to be of importance in people's lives.

Genova and Greenberg [97] suggested that lack of interest was the issue, rather than lower education. They found, too, that the significant factor was social interest - issues of wide relevance that can be talked about - not self-interest.

Ettema *et al.* [100] concluded that the knowledge gap would widen only where some are more motivated to learn about the subject than others. If motivation is uniformly high (and information is accessible), the knowledge gap can be closed.

6.5 PRIOR KNOWLEDGE, INTEREST, AND INVOLVEMENT

The levels of knowledge and involvement that an individual brings to the scene of the communication is noted as a variable in many studies. Sternthal *et al.* [50] discuss the interactions between recipients' initial involvement or initial opinions on perceptions of source credibility, but their conclusions appear ambiguous and confused. However the theory is that we internally counter-argue or support a proposition as we listen to it, and it may be that we counter-argue the more strongly when, while the case is strong, our preconceptions are stronger.

The situation most difficult to model seems to be that in which the message attempts to convince someone away from a well-entrenched view, especially where that view is strongly legitimised by group (cultural, religious, etc.) norms. In this case changing one's attitude may mean finding a new circle of friends. Perhaps the analysis of this situation - opposing a well-entrenched view - is just too ambitious, especially in that the idea of counter-arguing relates to a single communication whereas a major opinion shift is more likely to be a cumulative response to many messages.

Neumann [7] postulates a threshold level of public attention - repetition in the media pushes an issue into public debate (but only some types of issue - some remain boring no matter what).

Singer and Ludwig [23], who studied the effects of restrictions on press coverage of South Africa, said something a little similar. They found that sympathy for the black population of South Africa declined during the press blackout - but this decline was almost entirely amongst those who said that they were not closely following events in South Africa. In other words, those who were interested were relatively stable in their views, while the media affected primarily those who ordinarily paid little heed.

Harold Mendelsohn [1] considered it essential to target the audience on the basis of its members' initial interest in the issue: "...the publics who are most apt to respond ... have a prior interest in the subject areas presented ... this segment of a potential audience requires totally different communications strategies and tactics from ... an audience that is initially indifferent." He suggested, however, that successful campaigns have been those which assumed that the targeted population had little or no prior interest in the topic (perhaps because this implies a lack of initial opposition?).

Iyengar and Kinder [3] look at the "involved" variable in light of the agenda-setting / priming dichotomy. They suggest that agenda-setting manipulations are less effective for members of the major political parties - who are therefore assumed to be involved - than for "independents". Perhaps this is because a

party identification already has a strong influence on an individual's political agendas. However, the opposite is true for the attitude modification process. The more politically involved are susceptible to the content of newscasts on topics they are interested in.

At the end of it all, it is hard to get away from following what feels intuitively right. That the media can seek to affect those who currently don't consider an issue to be important, or who concede its importance but have yet to make up their minds about it. While for those who already have an agenda or an opinion, media coverage might confirm them in either their agreement with or their opposition to the stance of the message, or it might provide an impetus to question their views, or then again it might convey some other message altogether (they don't know what they are talking about, it's all part of the International Conspiracy).

6.6 CULTURAL VALUES - MATERIALISM AND SELF-INTEREST

It is a salutary culture shock to scan popular magazines of, say, the 50s, and to see the extent to which our opinions are grounded in the accepted values of the time. Ronald Inglehart has written two books (for reviews see [59] and [12]) which look at changes in the basic values of advanced industrial societies.

His argument is that there has been a steady shift away from the long predominant preoccupation with material well-being and physical security, towards a greater concern for quality of life, more self-expression, greater sexual freedom, and less formal interpersonal relations. He finds about three times as many "materialists" (social conservatives) as "post-materialists" (progressives) in 1973, reducing to twice by 1988.

The tendency towards these attitudes, he says, is shaped by the level of affluence and security enjoyed during the pre-adult years of each generation's lifetime. Neither aging nor economic changes in later years affect this.

As each generation since 1950 entered an increasingly affluent and secure world, so each generation has been increasingly "post-materialist" in its values, and these values have stayed stable as the cohort aged.

The work is based mainly on twice-yearly surveys carried out in Europe from 1970, and whatever the overall shift, there are wide differences in the absolute values between various countries.

There might be two implications for DoC. Firstly, to the extent that many areas of its work have "post-materialist" values, then whether this concords with the general feel of the time is obviously relevant. Secondly, perhaps arguments can be tailored to suit. Preservation of biological diversity might be a quality of life issue but can also be presented as one of material well-being (the "undiscovered drug" argument, for instance).

It would be interesting to attempt Inglehart's analysis in New Zealand.

Earlier, in the context of the transferability of findings from other countries to New Zealand, I mentioned an index of four dimensions of cultural difference

amongst 40 countries [85]. The four dimensions were power distance - the degree to which power in organisations is distributed unequally; uncertainty avoidance - tolerance of ambiguity, informality, and diversity; individualism - emphasis on individual rather than common values; and "masculinity" - things, money and assertiveness versus people, quality of life, and nurture.

These are pretty broad-brush measurements. However, they could be borne in mind not just in considering the applicability of research but also to considering particular campaign strategies. The scale suggests that New Zealand is closer to Canada and Ireland than it is to either Australia or the USA, so perhaps we should be drawing on the experiences of the former countries as far as we can.

If we are still fairly strongly materialist, does that mean that self-interest is a major factor in our policy preferences? With the important caution that the materialism data comes from Europe and the self-interest data from the USA, apparently not - the impact of self-interest is less important than one might think.

Green and Gerken [2] cite a number of studies showing no systematic differences of opinion between people affected by and not affected by job programmes, government health insurance, aid to education, preferential hiring, military intervention, affirmative action for women, increased drinking age, crime, rising energy costs, mandatory exams, and housing shortages.

The one issue where self-interest did affect people's attitudes was that of smoking restrictions and cigarette taxes.

The authors of the survey offer some possible reasons for the anomaly, and suggest that the smoking issue has become highly polarised for two reasons. Firstly, it is a relatively simple issue - it is not greatly overlaid with philosophical questions about the social role of the state or other ambiguities that might leave people with mixed feelings. Secondly, there is little to attract non-smokers to a tolerant position on cigarettes, with the health and social disadvantages generally accepted by both sides.

Self-interest is different from involvement, which I discussed earlier. Something may be in our interest but we don't much care one way or another, or we believe that whatever we do does not affect things anyway, or we may accept greater social goals. Nevertheless, one would expect connections between self-interest and involvement, and it is interesting that, in the main, the dynamics seem to be different. It appears that personal involvement always has an effect, but self-interest is important only when the individual is also involved. Perhaps the increasing role of post-materialist values is generating an increased amount of altruistic involvement, or perhaps the issue is just one of balancing the individual's personal and social roles.

7. The "new marketing"

At the beginning of this report I used the "standard" communications model as way to provide category headings, but I suggested that this Message-Medium-Recipient model is deficient as an explanation.

Regis McKenna [93] offers a view of the decline of "monologue" advertising, in favour of incorporating the customer into a product design feedback loop. Although he is talking of products, advertising, and private sector manufacturing, there are many parallels with what we are talking about here.

McKenna's article is over three years old, so rather than "new marketing" we might call it "interactive marketing". Interactive marketing has been driven by the same technological changes that allow customised mass manufacturing. With normal production line manufacturing the car maker ran a model, which could be slightly modified in the showroom with a few extras. Now, the production line can build to your particular mix and match of features. The result is that new ways of marketing are needed, but these are also made possible by the same information technology that has changed manufacturing.

Says McKenna, "We are witnessing the obsolescence of advertising. In the old model of marketing, it made sense as part of the whole formula: you sell mass-produced goods to a mass market through mass media. Marketing's job was to use advertising to deliver a message in a one-way communication: 'Buy this!'. That message no longer works."

It no longer works, he suggests, for three reasons. The first is overkill of messages - the bombardment of advertising. (See [98] too.) The second is that, as a result, consumers have got fed up. The third, most relevant to us, is that advertising serves no useful purpose. By not including a feedback loop, it misses the fundamental point of marketing - adaptability, flexibility, and responsiveness.

So (mentally changing "company" and "customer" to suit) "The goal is adaptive marketing, marketing that stresses sensitivity, flexibility, and resiliency. Sensitivity comes from having a variety of modes and channels through which companies can read the environment, from user groups that offer live feedback to sophisticated consumer scanners that provide data on customer choice in real time. Flexibility comes from creating an organisational structure and operating style that permits the company to take advantage of new opportunities presented by customer feedback. Resiliency comes from learning from mistakes - marketing that listens and responds."

In other words, a shift from monologue to dialogue. "Technology permits information to flow in both directions between the customer and the company, it creates the feedback loop that integrates the customer into the company, allows the company to own the market, permits customisation, creates a dialogue, and turns a product into a service and a service into a product."

Chen and Land [19] come to more or less similar conclusions from a totally different perspective. They examined the Health Belief Model, which asserts that an individual's preventative health activities (in this case, preventative dental visits) are determined by beliefs rather than by facts. The Health Belief

Model breaks down beliefs into four dimensions - personal susceptibility, perceived barriers to taking action, perceived seriousness of the problem, and general health motivation (a schema that might be useful for conservation issues too).

The point of their work was that "... the major assumption of the Health Belief Model, that health beliefs precede and motivate health behaviour, may be too limited ... the causal relationships are not necessarily unidirectional, and they differ for various health beliefs."

8. Conclusions, recommendations and speculations

How can we bring all this together?

Firstly, the question as to which medium is the most effective (per dollar spent) is not a useful question unless we pin down the conditions more closely. More effective for what types of message, to what sorts of people, at what point in a campaign?

Secondly, focusing on any one aspect such as the medium, or the facts and style of the message, starts the process at the wrong point. Allocating funds by medium should not be a global activity, but a subcategory of an issue or a campaign. The prioritising implicit in allocating funds should, in my view, be by issue rather than by medium.

Thirdly, the strong message from at least the more recent research is that of interactivity. In many fields apart from public opinion - for instance in manufacturing, management, education, and broadcasting - we can see two implications of this interactivity. Firstly, we see a move away from the idea of people as passive receivers of information, goods, or services, towards dialogue. Customers or clients define what they want, perhaps play a role in designing it, or seek a greater range of choice. Manages expect to be consulted rather than commanded.

This gives rise to the second implication of interactivity - "niche thinking" amongst the providers of goods and services, with their markets becoming increasingly fine-grained, specifically targeted, and less generic.

I see several issues for DoC. Some might be impractical and others might be already being done, so these are ideas for discussion rather than dogmatic assertions. In the next section I summarise some recommendations for specific campaigns. In the meantime, [32] offers some interesting thoughts from a different perspective.

8.1 IDENTIFYING SPECIFIC ISSUES AND TARGETS

One of the frequent lessons from the literature is the need for objectives which are clear, specific, and achievable. Not only that, but to capture the regard of a wide audience an issue needs to generate fire in the belly. Take the preservation of wetlands. As an issue, it doesn't capture the imagination. Yet the preservation of a specific area of mangrove against a marina development has been the stuff of a nightly soap opera.

Nevertheless, the definition of "issue" can't be separated from the question who it is an issue for. Better educated, higher income women will relate to different issues than will unemployed, poorly educated men.

Thus the preservation of wetlands might be DoC's objective, and the target might be the preservation of a particular area of mangrove. The issue for some people will be the preservation of fish stocks, for others it will be loss of diversity, and others might see in it an example of development greed.

8.2 IDENTIFICATION OF NICHE MARKETS

DoC's Associates/Visitors/Supporters classification is more or less the "involvement" variable discussed in this report with psychological factors.

But consider two current issues - the culling of Kaimanawa horses, and the taking of undersize shellfish. It seems to me that developing media strategies for these issues demands a narrower definition of the audiences. The shellfish problem, for instance, might match well with the "Green Indifferents" group in Colmar and Brunton's 1990 survey. The horses have a very different constituency.

I have not attempted to relate the Colmar and Brunton survey to the issues discussed in this report, although it would be a useful exercise. My point is rather that each issue will have its own constituency, which needs to be identified in each case.

Not only that, but the constituency may be created by the issue rather than being a pre-existing group, and the constituency may change during the life-cycle of the issue (see Price [7], [75]).

At the same time there will probably be broader niche markets. For example: I have mentioned gender issues in the report; there is a body of support for what is perceived as traditional Maori conservation values; and there are clear community differences along an altruism/materialism scale. These would all seem to be dimensions along which to define audience categories, and maybe to find clusters (as Colmar and Brunton do).

8.3 EMPHASISE DIALOGUE AND DE-EMPHASISE MONOLOGUE

By "dialogue" I don't mean just the obvious request, for instance, for informational material. It also refers to the response to a questionnaire, or an analysis of letters to the editor. It's the "listening to the customer" culture, and relates to the niche marketing discussion above.

The challenge is how to respond to the individual needs of a person, a group, or an organisation, without spending undue resources on one-off work.

It might mean putting more resource into groups or issues which are particularly important in terms of DoC's objectives, while taking a lower profile in areas where other organisations are active. For instance, it might be that DoC does not need to put a lot of resource into the ozone hole discussion, because the medical (cancer) angle is so strong. On the other hand puaa poaching, especially if it is being done by "Green Indifferents", may require a specific campaign.

Also, DoC might act as a conduit for material from other organisations. For instance, while DoC might not want to produce project materials for schools, it might be able to either refer schools to other sources, or act as a clearing house.

8.4 KEEPING IN TOUCH WITH RESEARCH

Public opinion research draws upon work in sociology, political science, psychology, journalism, and other disciplines, so it's not an easy area to keep up with. Still, DoC staff don't need to be aware of every PhD paper. There are two areas where the DoC might want to ensure that it keeps reasonably well up to date. The first is in general texts which help to give the big picture, or which offer new paradigms which are also useful. The second area is that of case studies and evaluations of public information campaigns. Would it be useful to set up a specific collection of public information campaign case studies?

8.5 POST MORTEMES

Presumably DoC doesn't have the resources to do an academically respectable study of every issue it gets involved in. Nevertheless, it would be useful to maintain a collection of clippings sorted by issue (sorted either physically or by indexing - but easily accessible anyway). By "issue" I mean, for instance, the stand of Rimus that an owner started felling for firewood, the Kaimanawa horses, the Queen's chain debate, and so on.

This would be a useful resource in two ways. Firstly, as each issue becomes resolved or fades from immediate public view, it would be worth spending half a day or so to look back over its history, consider some of the theories outlined

in this report, and see what lessons can be drawn. Secondly, the collection could be a resource for serious research.

It would be interesting to look at recent issues using the typology and life-cycle framework offered by Neumann [7], and to see if this is a useful approach.

8.6 SPONSOR RESEARCH ON NZ/OVERSEAS COMPARISONS

Some of this is already being done, for instance the Colmar Brunton 1991 survey, and the "New Zealand Values Today" survey.

Particularly useful areas for DoC would be those which measure fundamental differences between (especially) the United States and New Zealand, so as to allow us to better apply other overseas research to the New Zealand situation. I am not sure what those fundamental measurements might be - perhaps such things as the materialism/altruism scale, and areas such as gender and race differences in media use and impact.

It might be possible to encourage some post-graduate theses. It would be desirable to find an institution that could handle multi-disciplinary work in several fields, for instance sociology, political science, journalism, marketing, social psychology.

It would also be valuable to observe dynamics of specific issues as they happen, and again this might be done in cooperation with a university.

8.7 EXAMINE DOC'S CREDIBILITY

Does DoC know what its credibility rating is, amongst various groups and in relation to various types of issue?

8.8 EXPLORE THE POTENTIAL OF DATA COMMUNICATIONS

The "information highway" (Internet, Compuserve, etc.) is a powerful and fast-growing medium. It offers cost-effective ways of distributing information, and is inherently interactive. Its disadvantages are that it can be far from user-friendly, and has nothing like the penetration of the mass media.

There are several opportunities for the Unit. E-mail is a medium that has benefits over both telephone and mail, and a very large number of conservation-related organisations and interested individuals, in New Zealand and overseas, are accessible by E-mail. And while E-mail facilitates point-to-point communication, discussion forums allow public discussion or the posting of specific queries to very large numbers of people at once. Both these would allow DoC people to be active participants in a wide-ranging network.

Book and periodical indexes, databases of legislation, and a wide range of other material can help people to keep up with the literature.

At a higher level of commitment, DoC could establish a repository of information for access by schools, tourists, associated organisations, or interested individuals.

8.9 DEVELOP STRATEGIES FOR USING CD-ROMS

I have not seen anything in the academic literature about CD-ROMs, but they are an interesting medium. They are cheap to make, carry enormous amounts of information (text, sound, and pictures), and can be interactive. They could be a way for DoC to disseminate, say, its own reference material or photographs.

Commercial CD-ROMs are available [94] which use interactive materials to put across ecological messages. "SimCity" and its variations are already well known by being distributed on disk as well as on CD-ROM, but clearly there are others. This must surely be a very powerful medium, and deserves some consideration by DoC about how dissemination and use of CD-ROMS can be supported.

9. Recommendations for campaigns

Rogers and Storey [84] offer some generalisations from campaign research. "Despite many failures," they say, "important lessons about successful campaigns have been learned." So here is a summary:

Ensure widespread exposure.

Getting the message to the intended audience is the first necessity. Other variables come into play after that.

Set reasonable goals.

Strongly held opinions and ingrained behaviours are very difficult to change. An achievable though modest goal might be more productive than an unduly ambitious one.

Use the mass media.

The mass media are not a panacea, but can help to create awareness and disseminate knowledge, can stimulate interpersonal communication, and can help to recruit individuals into the campaign.

Activate interpersonal networks.

Interpersonal channels legitimate people's opinions, and motivate people to action.

Maximise the perceived credibility of the source.

One's peers are trustworthy, but professionals are knowledgeable. People take note of the motives (commercial, regulatory) of the source.

Get feedback during the campaign.

Ask questions and stay flexible - be prepared to change things that don't work.

Use salient appeals.

Ask people to do things that are relevant to their lives - avoid appeals to abstractions.

Promote rewards.

Preventative ideas (using seat belts, preparing for earthquakes) have less force than appeals offering immediate benefits. Promote exercise on the basis of having more energy now, rather than preventing heart disease later.

Target specific messages to particular audiences.

Targeted messages help to ensure that intended audiences get the appropriate messages, and make results easier to predict. Identifying and targeting the knowledge-poor minimises widening of the knowledge gap.

Don't stay in a media rut.

Some lateral thinking may be needed to ensure that appropriate media are used to reach targeted groups.

Consider timing.

Exploit timing factors or particular events which help receptivity of the message.

10. Appendices

10.1 DATA NETWORKS, INTERNET, ETC.

This appendix provides an overview of Internet from the point of view of its usefulness for DoC. I believe that Internet offers great potential in three areas: developing and connecting with an international network of people working in the same area as DoC; keeping up with overseas developments and obtaining up to date material on environmental issues; and obtaining environmental education material to pass on to teachers and other educationalists.

I provide some information about what Internet is and the resources it offers, on the assumption that many readers of this report will not have had first-hand experience. I also offer a selection of material (lodged in DoC's main library) which appears useful. The range of information available through the network means that this cannot be much more than a sample, but it should give a good idea of what is available.

All of the items [I.1] to [1.191] have been sourced from the Internet.

General information

Why the data networks exist.

The data networks use telephone lines to transmit data, but in a very efficient way. The data is chopped into pieces (packets), and each packet is sent separately. By interleaving these packets, a large number of users can share one telephone connection, and the cost to one user is very low (cents per minute, I believe).

What they are.

The Internet started with a few US academic and military establishments, who used it to for communication and resource sharing. The network has since grown enormously, but the basic concept remains the same. It is still a fairly ad hoc interconnection of many (several million) computers, most of which are non-commercial. Internet is not owned, and management of the network is informal, decentralised, and largely based on cooperation.

The basic building block of Internet is a computer network such as that used in the Wellington City Council, Victoria University, the Communicable Disease Centre near Porirua, the CRIB at Gracefield, and a host of others. These organisations provide access to Internet for their staff plus, in some cases, for others. Access may be through a terminal on the job, or by remote log-in through a modem.

Other data networks (for instance Compuserve) work in a totally different way. Compuserve is a commercial organisation, and operates through a computer in the USA. Access to Compuserve is available wherever the company has established connections (in New Zealand: Auckland, Wellington, and

Christchurch). It is centrally managed, more consistent, easier to use, smaller, and costs more than Internet.

The user interface for Internet varies from one site to another, from slightly awkward to downright hostile. However it is improving.

U.S. Vice-President Gore's Information Superhighway philosophy seeks to provide American homes and offices with interactive multi-media access to information, communication, and entertainment. He sees a vastly improved communications backbone as a strategic issue for US economic development.

It may be that Internet will form the backbone of the Information Superhighway, or perhaps something else will evolve. However it happens, access to data networks is becoming ever easier, and represents the birth of a new and potentially very powerful medium.

Internet facilities

Internet is mainly used for text. It also handles sound files and graphics images, but I will not cover these specifically.

Internet offers three main facilities - E-mail for individual to individual communication, bulletin boards for discussion forums amongst groups of people with similar interests, and access to information resources.

E-Mail

E-mail is straightforward, virtually instantaneous, and very cheap. It has a couple of problems. Given the enormous number of users and the lack of a centralised management body, it can be difficult to find an individual's Internet address (although on-line directories are some help); and E-mail between Internet and other data networks is not without hassle.

A valuable use of E-mail is electronic subscriptions. By requesting it, you can have updates of discussion forums, electronic newsletters, magazine contents pages, and other material sent to your E-mail address, usually without charge.

Discussion forums

About 3,000 discussion forums - "news-groups" - are available. They operate on the analogy of the shopping mall community notice-board, on an international scale. Some news-groups contain little but extreme juvenilia, others exist to exchange politically incorrect jokes, and others are inhabited by scientists whose questions to each other are incomprehensible to the rest of us.

There are two main types of news-group. Firstly, there are short messages in which someone asks a question and others respond. For instance, in item [I.2] one person asks a question and several answers are posted.

Secondly, there will be longer items comprising several pages of text - item [I.3] is an example.

Often there are FAQ (Frequently Asked Questions) files to help newcomers to the news-group, and there may be collections or lists of useful material. It is an easy matter to transfer items to your own computer or terminal for editing and printing.

News-groups that the DoC staff might find useful would include sci.environment and the several sci.bio groups (see item [I.4] for a description of these.

A LISTSERV mailing list is a special type of discussion forum, in that you subscribe to it and it is E-mailed to you at regular intervals. There are about 2500 of these, and many of them are copied to news-groups or to archives where they are readily available. Item [I.4] is a list of Lists of interest to biologists. Often the subscription list is available and can help in contacting people interested in a specific area - [L 18] is the subscription list to ECOLOG-L.

Information resources

The starting point for Internet information is the gopher (named after the state animal of Minnesota, at whose university it was developed, and also a pun on the film industry executive who goes for the afternoon tea). The gopher is a piece of software which the user sees as a series of menus and sub-menus. Behind the menu is an address on Internet, and in essence a gopher menu selection does one of three things: pulls down information from that address, connects my computer directly to a remote system, or connects me to another gopher somewhere else.

Although the basic operations of all gophers are pretty much the same, the actual menu structure is completely individual to each one. Gophers are of two main types. One type is organisation-specific, for instance the Victoria University gopher, that at the Wellington City Council, and those at several hundred university campuses world-wide. The other type is set up to help users find resources on a specific subject, for instance the various environmental gophers.

Item [I.5] offers an overview of gophers, although the article makes the process sound more complicated than it is.

Items [I.11], [L12], [I.16], and [I.17] give some idea of the number, range, and scope of gophers.

The way that gopher menus work can be seen in some of the items where I have left the menus in the printout, for instance [I.16] and [I.17].

The gopher software also includes an elegant keyword search capability. A search on "environmental education" gives me a list of gopher menu items containing those words, "extracted" from their home gophers and presented on the screen in a menu format. The list forms a customised, temporary, but fully functional gopher menu.

So gophers are a navigation method and an information search system in one. Any one gopher provides access to others and it is easy to travel around the Internet's information resources, although finding something and later forgetting how you got there is an occupational hazard.

Information resources available via gopher include the on-line catalogues of several hundred university and other libraries, large amounts of US Government material and federally funded research, the ERIC educational publications database, the CARL UnCover periodicals index and many other periodicals search facilities, archives of many newsletters and bulletin boards, information

about using Internet and its facilities, reference material like Rogets thesaurus and the periodic table, and much more. In the next section I survey some of the material of interest to DoC.

Specific information from Internet

Information about Internet itself.

Item [I.6] is an index of information about Internet and computer-mediated communication. Most of the material is accessible on the net, but some print material is included also. It is a bit detailed for our purposes here, but may be useful for reference.

Environment and environmental education.

It may be a measure of increasing world-wide concern for environmental issues that there is a large and increasing number of environmentally-specific gophers on Internet, with more being set up. For instance, item [1.11] includes an announcement of a new environmental gopher for Central Europe.

Items [1.171 and [1.18] both offer overviews of environmental information on Internet. Item [1.171 is a bit more explanatory and probably the better one to browse through.

A high proportion of the environmental material on Internet is either technical and scientific, or activist, and therefore not directly applicable to DoC's work. Relevant material can be found under "environmental education", but on Internet this tends to be a subset of education. Thus it is oriented particularly towards schools and universities, and much of it misses the public relations flavour and the public information campaign elements of the Unit.

Substantial environmental education resources are offered through the ERIC (Educational Resources Information Center) publications database. Item [I.9] is the record of an exploration, using gopher, of ERIC and its environmental education resources.

Most of the first two pages of this item comprise an outline of the AskERIC virtual library, of which one item is the ERIC Clearinghouse for Science, Math, and Environmental Education (CSMEE). Following this is some explanatory material about CSMEE, and descriptions of some of the materials available.

A list of about 100 publications sold by ERIC/CSMEE shows quite a few which look relevant to DoC and to the subject of this report.

The CSMEE information includes reference to Digests - two-page information sheets on topics of interest. I have included four of these with this item (following the blue sheet).

Item [1.10] is a report of the NCEET (National Consortium for Environmental Education and Training), and is the result of a survey of 38 organisations providing environmental education resources. Its focus is mainly on educational institutions.

The US Environmental Protection Agency offers a wide range of resources through its gopher. Item [1.12] is the top-level menu of this gopher, and items [1-131 and [1.14] are from one of the publications available on-line (as well as in

print form). Chapter 1, on public information tools, provides some background on the EPA's structure and functions, and details of documents and resources available from the EPA.

Another US Government gopher is the FedWorld gopher of the National Technical Information Service. NTIS has the task of making publicly available any non-classified research funded by the US government, and FedWorld is expanding so it can handle this. Federal research funding amounts to some billions annually, so there is a large amount of material.

About half the connections to Internet are in the USA, and American information is easiest to find. However that focus is changing as more networks are set up elsewhere in the world. Items [1.11], [1.16], and [1.17] give an outline of material available from Europe, the UK, Canada, and Australia.

Item [1.19] is a comprehensive list of acronyms, from the Australian ERIN (Environmental Resources Information Network) gopher.

Contacts

One of my objectives in this report was to use Internet to seek out organisations and individuals working in similar areas to those involved in public awareness and publicity in DoC, as Internet would offer an easy and efficient way to network with them.

Item [1.13] contains some potentially useful contacts in the EPA, including their Public Affairs section and their Office of Information Resources Management, although E-mail addresses are not included in this document.

Item [1.15] is a list of environmental education coordinators for each American state.

Item [1.16] is the printout of a brief exploration of the gopher provided by the British Columbia Ministry of the Environment. The item includes material about the Ministry, and contains contact lists of individuals working in the Public Affairs and Media Services unit. A brief overview of Natural Resources Canada is included in [1.11].

Closer to home is the Australia ERIN (Environment Resources Information Network) database and gopher. Item [1.18] is a list of Australian federal and state environment departments with contact details.

As I mentioned earlier, the ECOLOG-L mailing list is aimed at members of the Ecological Society of America and like-minded people. Item [1.181] is a list of its subscribers and their e-mail addresses.

The contacts mentioned here are a mixed bag, but show that people can be found, by name or by function.

At the beginning of this sub-section I mentioned the objective of finding people working in areas similar to DoC staff working in public awareness and publicity areas. The better approach, I now believe, would be to start with a request for information and see who responds to it. For example, DoC could seek help on the Internet to find reports and experiences of public information campaigns, to find if any agencies were carrying out certain types of research, etc.

10.2 SOURCES

I have used two main sources of material.

The first is the literature on public opinion change. Little of this specifically looks at environmental issues. Much of it is based on analyses of political opinion change and voting behaviour and, generally speaking, this has not been useful. About an equal amount examines assorted variables in people's response to the media, and this is the basis for most of the report. I have found the American periodical *Public Opinion Quarterly* to be the most useful single publication, and have mined it heavily. It has, a high standard of academic rigour, but retains contact with the real world.

There is a reasonable amount of literature on health education, and this is an area which could be pursued more intensively. At the same time, there is a fundamental difference between health and conservation, in that health issues affect the individual directly and personally. The message from the health area - that it can be quite difficult to encourage people to act in ways which directly benefit them - is not one to give the conservationist much cheer.

I thought that the industrial and road safety areas would provide useful material, but have not found a great deal. It may be that the traditional enforcement role of road safety organisations and the semi-moral tone of some of the material gets in the road of the educational function and creates a different culture from that of a conservation organisation.

A second main source of information has been the Internet. The Internet is a loosely-organised and ever-growing network of computers and their users, mostly in universities and research institutions. It offers access to enormous amounts of material, but the problem is finding it.

This report includes navigation instructions for accessing a number of useful resources, including several environmental and educational discussion forums, the US Environmental Protection Agency's bulletin boards and databases, online resources of Australian and Canadian environmental organisations, the "FedWorld" resource of the US National Technical Information Service, the ERIC educational periodicals index, and the "UnCover" periodicals index / faxing service from the Colorado Alliance of Research Libraries, which provides a searchable index to about 15,000 publications.

One of my objectives was to identify and contact people doing work similar to that of DoC's Public Awareness Unit. I have not made contact with any such, but I include lists of potentially useful contacts, for instance of regional public affairs people for the US EPA.

Where I have come across them, I have also printed out catalogues, bibliographies, or lists of useful publications, descriptions of information sources, etc.

10.3 BIBLIOGRAPHY - AUTHOR ORDER

Supplied photocopies are numbered 1-500 and are lodged at DoC main library, Wellington.

See page final page for periodical abbreviations.

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- Andreold V & Worchel S** [53] POQ 42:59 1978
Effects of media, communicator, and message position on attitude change.
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10.4 BIBLIOGRAPHY - NUMBER ORDER, WITH NOTES

Supplied photocopies are numbered 1-500 and are lodged at DoC main library, Wellington.

See page final page for periodical abbreviations.

[1] Mendelsohn H

POQ 37:50 1973

Some reasons why information campaigns can succeed.

Argues against "public apathy" (Hyman & Sheatsley POQ 11:412) Fault isn't that of the recipients.

The publics most apt to respond to mass-mediated information messages are those with a prior interest in the subject.

So to get to those initially indifferent, you need totally different communications strategies and tactics.

Essential step - delineate realistic targets along continuum from those with no interest to those with high interest.

Communications practitioners are guided mostly by subjectively derived principles of communication.

Communications campaigns are relatively unsuccessful when communicators fail to use principles derived from research. Communication Arts Center U of Denver - researcher/practitioner teams.

Public information campaigns successful where:

- Assume most of recipients are mildly or not interested.
- Middle-range goals are set as specific objectives.
- Recipients are specifically targeted.
- Demographic, psychological, lifestyle, values, beliefs, mass media habits.

Examples:

- Driving deficiency program:
 - Three specific objectives
 - Innovative info-giving formats
 - Strong promotion
- Drinking and driving program:
- Innovative medium (animated film)
- Chicano program:
- Soap opera series

[2] Green D P & Gerken A E

POQ 53:1 1989

Self-interest and public opinion toward smoking restrictions and cigarette taxes.

Self-interest has an unusually large impact in the case of cigarette taxes.

Probably because the costs and benefits are very clear and salient, and because the non-smokers' position has gained legitimacy in recent years.

[3] Iyengar S & Kinder D R

POQ 53:2771989 Uni of Chicago Press 1987

News that matters: Television and American opinion. (review)

TV news "an educator virtually without peer" that "shapes the American public's conception of pol life in pervasive ways".

Priming - Changing the definition of standards that people use to make political evaluations.

Projecting - People interpret new events and reinterpret old ones in order to maintain consistency with existing predispositions

Agenda setting - the public problems people hear the most about in the news are those they say are most pressing for society.

Most effective on pol uninvolved viewers.

Lead stories enhance agenda-setting

Greatest where limited political skills and interests

Priming - TV news emphasis also "sets the terms by which pol judgements are rendered and pol choices made."

Most effective on pol involved viewers - susceptible on "their" issues.

[4] Sussman B

POQ 53:281 1989 Pantheon Bks NY 1988

What Americans really think and why our politicians pay no attention. (review)

Voters are cynical, ill-informed, distrustful of politicians, but basically decent. Most outlooks easily manipulated, esp by tv.

Offer set of hopes and fears, priorities and values.

Leaders cynical, manipulative, contemptuous, fearful of pub opinion.

[5] Crompton J L

1986

Wiley NY 1986

Marketing Government and Social Services.

Contents:

1. What is Marketing?
2. Relevance of marketing to government and social service agencies.
3. Developing a marketing plan.
4. Evaluating marketing efforts.
5. Identifying potential target markets.
6. Selecting target markets and identifying sources of unresponsiveness.
7. Allocation decisions - the equity issue.
8. Strategic distribution of services.
9. Program management.
10. New program development.
11. Diffusion of new services.
12. Program retrenchment.
13. Objectives of pricing.
14. Establishing a price.
15. Promotion - an overview.
16. Advertising and public service announcements.
17. Personal selling.
18. Publicity and incentives.

p377. Promotion - four steps: Informing; Educating; Persuading; Reminding.

Potential clients pass thru six steps: Awareness that it exists; Interest - active search for infor; Evaluation of merits; Trial (or references from others); Decision to accept or reject; Confirmation that right decision made.

p386 Conditions of successful communication: Gain attention; Address wants and suggest means to satisfy them; Position appropriately, consistent with existing knowledge and experience.

People are selective in exposure, distortion of message, and retention.

Addressing wants: What's in it for me?

People reject what doesn't fit with what they "know". Don't try to change mind - build on what's there.

Promotion budget - four approaches: Arbitrary (judgement and experience); Percentage; Service participation and use; Objective and task approach.

p409 Advertising and public service announcements - various media. Uses of advertisements. Cost per exposure for various media (paid advertising).

Some good references.

[6] Kapferer J N

POQ 53:467 1989

A mass poisoning rumour in Europe.

Apparently "underground" leaflet on food additives.

Very wide dissemination, esp wealthy and educated.

Opinion leaders uninformed and didn't check source.

Apparently confirmatory of existing beliefs.

[7] Neumann W R

POQ 54:159 1990

The Threshold of public attention

Prev work shows media influences public agenda (POQ46:177)

Revisions of hypothesis:

Media lead public or vice versa?

Both respond to third variable - real world

Which media - tv the critical one?
 Audience types
 Obtrusive/nonobtrusive issues
 Issue-attention cycle (POQ 28:28 nys)
 Preproblem: Exists but not yet captured public attn.
 Discovery: Steep ascent of attn.
 Plateau: Realisation of complexity of problem.
 Decline: Public inattentive, perhaps frustrated.
 Postproblem: Inattn, tho objective conditions remain.

Four types of issue:

Crisis:

Vietnam, urban unrest, energy crisis
 Have a real-world life cycle
 High attn peaks, hi media/opinion covarn

Symbolic crisis:

Drugs, pollution, poverty
 Ongoing, but defined as crisis for limited time
 Middling attn peak, fairly high media/opinion covarn

Problems:

Inflation, unemployment
 Periodic crises
 Extremely hi public concern, but to media coverage
 Moderate covarn

Nonproblems:

Crime
 Enduring problem
 Lo peaks of concern, fairly hi coverage
 No covariation

Public opinion vs media coverage for four types of issue

More or less straight line, slopes differ.

[8] Brown M L & Potosky A L

POQ 54:317 1990

The Presidential effect: The public health response to media coverage about Ronald Reagan's colon cancer episode

Pres Reagan's colonic cancer episode Jul 85.

Sharp increase in public interest and action

Some ongoing elevation in interest.

[9] Smith T W & Weil F D

POQ 54:609 1990

The polls - a report. Finding public opinion data: A guide to the sources.

[10] Singer E, Rogers T F, & Glassman M B

POQ 55:161 1991

Public opinion about AIDS before and after the 1988 US government public information campaign.

Pre/post study of US Govt campaign in Oct 1987

Some changes in knowledge took place, but essentially a continuation of trends begng before and contg after.

Comparison with similar UK campaign, which showed changes in knowledge and attitudes, but not behaviour.

Campaign comprised:

- Eight-page brochure mailed to every household in the country.
- Radio and television spots aimed at specific groups.

Study looked at changes in knowledge, concern, and reported behaviour.

Increases in knowledge of some of the messages. Some increase in reported behaviour. Data ambiguous for concern.

Those with more initial knowledge gained more than those with less. In some cases, less knowledgable became even less so.

Generally speaking, the trends shown during the campaign period were also evident before and after.

- "So far as changes in knowledge are concerned, we would argue that the campaign had no discernable effect."

- No evidence that it closed the knowledge gap between well and ill informed.

(Prior research, noted, suggests that this would not be expected.)

- Observed changes in knowledge resulted from a general climate of information, of which campaign was a fairly minor element. Surgeon General's Report on AIDS (1986) probably important in generating media coverage.

Campaign coincided with peak in media coverage. News stories:

| | | | | |
|------|------|-------|------|-------------|
| 1985 | 1986 | 1987 | 1988 | 19890 qtrs) |
| 5007 | 5377 | 11852 | 7574 | 5231 |

[11] Dixon R D, Lowery R C, Levy D E, & Ferraro K F POQ 55:241 1991

Self-interest and public opinion toward smoking policies: A replication and extension.

See also [2].

Self-interest usually has to impact on attitudes.

However on tobacco issues, attitudes follow interest.

Perhaps because costs and benefits are clear and salient.

[12] Inglehart R

POQ 55:303 1991 Princeton Uni Press 1990

Culture shift in advanced industrial society. (review)

Material vs postmaterial

Latter thrives if people have affluence and security during preadult years.

[13] Easterlin R A & Crimmins E M

POQ 55:499 1991

Private materialism, personal self-fulfillment, family life, and public interest.

Changes in the values of American youth

Increase in pvte materialism, decrease in self-fulfillment.

Decrease in support for govt action in (e.g.,) environment.

Probably reflection of economic deprivation in society at large.

[14] Dunlap R E & Scarce R

POQ 55:651 1991

The Polls: Environmental problems and protection

See also 27 for an earlier (1986) poll analysis.

Increasingly salient, tho not most important.

Increasingly seen as serious.

Increasingly seen as threat (personal and overall).

Growing belief that private sector doing poor job.

Increasing preference for environment over growth.

Increasing willingness to absorb costs (tho only if small).

[15] Garramone G M & Atkin C K

POQ 50:76 1986

Mass communicaton and political socialisation: Specifying the effects.

Examines impact of four news media on four types of political knowledge and behaviour on adolescents.

Coefficients:

| | Knowledge | | | Behaviour | |
|--------------|-----------|---------|-------------|-----------|---------------|
| | Overall | Current | Fundamental | Discn* | Antic partn** |
| Television | .27 | .27 | .16 | .25 | .08 |
| Newsmagazine | .09 | .04 | .09 | .04 | .07 |
| Radio | .07 | .10 | .02 | .14 | .08 |
| Newspaper | .04 | .02 | .05 | 1 | .22 |

*Interpersonal discussion **Anticipated participation

Background variables:

Males, older, and more academic students more knowledgeable.

Academic students more likely to discuss and to anticipate future activity. Younger students more likely to anticipate participation.

The correlation between print media exposure and anticipated participation is stronger for less academic students.

So:

Television provides the most political knowledge, esp. of current events. Radio is also effective for current events.

Television has the greatest influence on discussion, then newspapers, then radio.

Newspapers have the most impact on anticipated participation.

Approachability of television may compensate for less academic or politically interested students.

[16] Zillmann D & Bryant J

POQ 52:272 1988 Lawrence Erlbaum NJ 1985

Selective exposure to communication. (review)

c|r] Selective exposure as a strategy for coping with information overload.

Entertainment programmes may be chosen for value in morning tea discussion.

Desire for old and familiar messages.

[17] Petty R E & Cacioppo J T

POQ 52:262 1988

Communication and persuasion: Central and peripheral routes to attitude rev change. 1986.

Mass communications evoke two routes to attitude change:

Central route - the merits of the arguments.

Peripheral route - cues irrelevant to argument quality.

c|r]Central route requires people able and motivated to process arguments.

Able when - well informed, understand issue, undistracted, familiar with arguments (by repetition).

Motivated when - issue personally relevant, forewarned of persuasion attempt.

Quality of the argument is key determinant of attitude change.

Peripheral route:

Impact determined by attractiveness or expertise of source, target's mood, music, rhetorical symbols, number or volume of arguments.

The two interact (e.g., quality of argument / distractions).

Central route more effective for persistence of attitude change over time, resistance to counter-propaganda, and attitude-behaviour consistency.

Perhaps overplays rational basis of action.

[18] Robinson M J & Kohut A

POQ 52:174 1988

Believability and the press.

Looks at believability ratings assigned to 39 news organisations.

Believability is a bit narrower than credibility. Latter tends to include issues like rudeness and insensitivity of reporters etc.

Each organisation rated "4" believe all or most, to "1" believe almost nothing.

Most people believe what they hear, see, or read.

Believability is not related to political or demographic variables.

No dichotomy between television and print.

Of 39:

Wall Street journal nr 5, Time 14. Otherwise top 16 places are television. (three or four unfamiliar names I take to be tv anchormen).

Local TV news 11.

Generally "hard news" sources top two-thirds, USA Today etc below (exception of Reader's Digest - 17).

Radio news 19, daily newspapers 20, Associated Press 22, national newspapers 28.

National Enquirer 39.

Demographic variables. Believability higher by:

Gender - women's scores about 5% higher.

Age - 18-24 group highest.

Education and information - some suggestion, though ambiguous, that better educated and better informed are generally more sceptical about things.

Types of news source:

No print/broadcast division.

Dimensions tend to be - routine, special, soft, and personalities.

Routine - normal daily source of news. High believability, esp for young, minorities, and those less knowledgeable about the press.

Special - High scorers tend to be men, caucasian, urban, interested in public affairs.

Soft - "Parade", "Reader's Digest", etc. High believability from low income, low education, uninterested in the press or national topics.

Personalities - Believability awarded on basis of visibility.

[19] Chen M & Land K C

SPQ 49/1:45 1986

Testing the health belief model: LISREL analysis of alternative models of causal relationships between health beliefs and preventative dental behaviour.

Analyses causal relationships between American women's health beliefs and their preventative dental visits.

Previous work:

Assumes four conditions for an individual to take action against a disease:

- Psychologically ready - susceptible, serious consequences.
- Believes measures feasible, efficacious, and cost-effective
- Stimulus occurs to trigger action
- General health motivation.

Study found that some causal relationships are bidirectional.

Susceptibility: More perceived susceptibility caused increased visits; more visits lessened perceived susceptibility.

Barriers: Fewer barriers, more benefits.

Seriousness: Perception of seriousness and visits were unrelated.

General health motivation: Causes more visits through intermediate variables.

[20] Hill D B

POQ 49:340 1985

Viewer characteristics and agenda setting by television news

Examines viewer attributes that affect agenda-setting by tv news.

Previous work:

Recall helped where viewer:

- Motivated to view
- Has prior knowledge or interest
- Is attentive
- Plans viewing in advance.

Agenda-setting strongest where (in order from greatest):

- Prior print media exposure to news topics
- Full attention given to programme
- College education

Colour television

Frequency of exposure relatively unimportant.

Colour tv may be spurious effect of social status.

[21] Behr R L & Iyengar S

POQ 49:38 1985

Television news, real-world cues, and changes in the public agenda.

Examined effect of CBS news stories on inflation, energy, and unemployment.

Television news sets public agenda for inflation and energy.

For unemployment, agenda set by economic conditions, not media.

Unemployment had much less news coverage.

Public opinion has little effect on level of coverage.

Lead stories are significantly more powerful in shaping public agenda.

Possible reasons:

- Deemed and accepted to be most important story.
- Higher attentiveness at first.
- Earlier arguments more persuasive than later ones.

Each energy or inflation lead story raises concern by about 1.25%, though unemployment stories have no affect.

Nonlead stories have no effect.

Agenda-setting effect generally lasted less than two months.

Issues selected for study are obtrusive - tangible for individuals. Public concern for symbolic issues may be a good deal more susceptible to media coverage.

[22] Protes L P, Leff D R, Brooks S C, & Gordon M T POQ 49:19 1985

Uncovering rape: The watchdog press and the limits of agenda setting.

See also [71] and [26] - later study and overall conclusions.

Examined effects of newspaper investigation into handling of rape cases by Chicago police.

Minimal impact on public attitudes or knowledge about rape.

Maybe some effect on general concern about crime.

Little impact on views or actions of policy elites.

Symbolic policy actions.

Significant increase in rape stories in the newspaper.

Possible explanations:

Tone and content dry and dull (cf televised health-care expose).

Rape as social problem possibly already reached "saturation" level in public mind.

Crime reporting may increase general concern, rather than for specific types.

[23] Singer E & Ludwig J

POQ 51:315 1987

South Africa's press restrictions. Effects on press coverage and public opinion toward South Africa.

Examines effects of South African Govt media restrictions.

The press ban did not affect the amount of coverage.

However coverage relative to political violence decreased.

No great differences between broadcast and print media.

When coverage declined sharply, so did viewer attentiveness.

When coverage declined sharply, so did sympathy for blacks.

Sympathy for blacks increased without increase in coverage.

Earlier research:

Population studies show media attention impacting on public awareness.

Studies following individuals show less impact.

This study suggests that the media affects primarily those who ordinarily pay little heed.

Two groups of "attentives":

Those interested by social and demographic characteristics largely independent of media attention. These may counterargue internally while watching newscasts.

Those interested only during attention by media. This group is more vulnerable to media agenda-setting.

[24] Ginsberg B

POQ 51:596 1987 Basic Books NY 1986

The captive public: How mass opinion promotes state power. (review)

Public opinion and state actions are predominantly shaped by well-off and powerful citizens.

[25] Robinson J P, Levy M R, et al.

POQ 51:600 1987 Sage, Beverly Hills 1986

The main source: Learning from television news. (review)

Three main questions:

Overall comprehension of evening news.

Impact of viewer characteristics (education, prior knowledge, etc.).

Impact of story attributes.

Comprehend the main point of about one-third of stories.

Little variation by viewer or story characteristic.

[26] Protes D L et al.

POQ 51:166 1987

The impact of investigative reporting on public opinion and policymaking. Targeting toxic waste.

See also POQ47:16 (1: Health care fraud), [22] (2: Rape), [71] (3: Chicago police).

This reports fourth study, and overall conclusions.

Three types of questions asked:

Attitudes and agendas

Affective responses

Changes in behaviour.

No detectable change in people's views.

Slight inclination to say that environmental news stories cause confusion.

Factors contributing to change of public attitudes:

- Unambiguous, dramatic, convincing, clear (police brutality).
- Toxic waste issue - potential rather than actual harm
 - bureaucratic delays rather than venal conduct
 - frequent exceptions and caveats
 - solution apparently in hand.

Non-recurring issue

- Rape, toxic waste, police brutality all "familiar".
- Lack of accumulated information may increase susceptibility to media messages, although effects may not be longlasting.

[27] Gillroy J M & Shapiro R Y

POQ 50:270 1986

The polls: Environmental protection.

See 14 for a later one - 1991.

Increasing support for regulation.

Reluctant to support harmful policies to improve economy or energy resources.

But may waver if faced with hard choices. Want to do everything.

[28] Gersh D

EDP 125:35 1992

Covering solid waste issues

Results of survey.

Specialists believe solid waste to be US' largest environmental problem.

Media coverage is of:

- air and water pollution
- hazardous waste
- global warming

Public's ratings mirror media's agenda

Less than 10% of either specialists or non-specialists felt that the media was doing a good job.

Lack of coverage was because of the lack of conflict, drama, controversy and emotion, and because of journalism's emphasis on the political over the technical.

[29] Schlossberg H

MNW 26:1 1992

Latest trend: Targeting consumers according to environmental beliefs.

Reports on seven environmental segments proposed by Angus Reid, whose group (not named) in Winnipeg, Manitoba, Canada has done four studies on the environment since 1989.

Consumer segments include:

- Hostile conservatives - upscale, Republican, well-educated, see environmental issues as just a way to sell newspapers.
- Young Activists - well-educated, Democrat, want environmental change now.
- Ambitious Optimists - high-income, well-educated, yuppies, Republican, prepared to pay more for environmentally friendly products.

Environment 4th most important issue to Americans, 3rd to Canadians.

Suggests marketers target younger groups - exposed to media, so shaping purchasing intentions and behaviours.

[30] Granzin K L & Olsen J E

JPPM 10:2 1991

Characterising participants in activities protecting the environment: A focus on donating, recycling, and conservation behaviour.

(Abstract only seen - ABI/INFORM.)

Characteristics of people who:

- donate items for re-use
- recycle newspapers
- walk where possible for environmental reasons

The heavy participators in these can be identified by:

- personal values
- involvement in the process of helping society.

More modest identifiers are:

- demographics, including media usage

- information sources.

(Periodical not at VUW or on CD-ROM.)

[31] Schlossberg H

MNW 25:1 1991

Americans passionate about the environment? Critic says that's nonsense.

Quotes Alan Caruba, head of National Anxiety Centre and publisher of a media guide.

Suggests that the way Americans really act - waste disposal, oil disposal, environmental propositions on state ballots

- shows that they are not as concerned about the environment as they say they are.

"People's behaviours are going to lag behind what they say."

[32] Lukaszewski

ES 5/11:17 1991

It ain't easy being green.

Speech by President of a PR? firm.

t

Environmental issues from an industry perspective.

[33] Harris M

AWSE 13/33:17 1992

Go with the flow.

Only 4% of viewers remember last commercial - viewers habituated to sensation-grabbing.

Making an activity somewhat (but not too much) challenging leads to "flow" which is between boredom and anxiety.

People more likely to listen to information, understand problems, and to act.

So use engrossment instead of quick and sensational hit.

"Flow" is from "a University of Chicago psychologist".

(Abstract only. Periodical not at VUW or on CD-ROM.)

[34] Fitzgerald K

ADA 64:32 1993

Health program puts local marketers back in school.

A new program links advertisers, local television stations, and schools in an effort to teach elementary school students about health, nutrition and fitness while encouraging them to watch the news.

[35] Pierce J P, Macaskill P, & Hill D

AJPH 80/5:565 1990

Long-term effectiveness of mass media led antismoking campaigns in Australia.

Abstract only

Television spots plus direct school and community campaigns.

Coordinated campaigns effective.

[36] Poppy J

BFJ 94:3 1992

Food for the heart: A Health Education Authority healthy eating campaign.

(Abstract only seen - ABI/INFORM.)

UK Health Education Authority provides and assists in providing health information to the public.

Look After Your Heart programme:

- joint initiative of HEA and Dept of Health.

- concentrates on smoking, diet, and physical activity

Six national food retailers used point-of-sale materials.

Food trade assns supported thru media relations and literature.

About 500 groups of health education officers throughout the UK became involved.

[37] McClure B H

SMB 46:12 1991

Will we be eating twice as much produce in the year 2000?

(Abstract only seen - ABI/INFORM.)

Describes the Five a Day Program for Better Health, a \$US29m promotional and educational campaign funded by National Cancer Institute and supported by 55 supermarket chains.

Specific goal - increase average servings of fresh produce to 5 per day by end of decade.

Four components:

- instore displays

- motivation of communities to participate

- national media campaign

- detailed evaluation of results

Communication and social change in developing nations: a critical view.

[39] Dejong W & Winsten J A HAF 9:2 1990

The use of mass media in substance abuse prevention.

(Abstract only seen - ABI/INFORM.)

Describes Harvard Alcohol Project.

Steps:

- use qualitative research to identify and analyse various demographic or psychological subgroups
- conduct pre-testing to ensure materials are appropriate
- evaluate to monitor progress and impact.

Campaign messages should:

- communicate incentives or benefits for adopting desired behaviour
- draw attention to immediate, high-probability consequences
- be cautious about celebrity spokespeople.

[40] Ulene A L

MMM 25:1 1990

Why the chlorestorol campaign is working.

AMA's Campaign against Chlorestorol considered an unqualified success.

60k physicians enrolled, 100 hospitals gave courses, >200k books and 25k audio cassettes sold.

Both traditional and alternative media used.

Success attrib to evaluation of media, consideration of various target audiences, creativity.

Guidelines:

- don't allocate media budget in advance
- judge each medium specifically against each new goal
- don't assume that effect of a particular medium is transferable from one product or campaign to another
- test the messages
- don't assume that things will stay the same.

[41] Flay B R *et al.*

AJPH 79/10:1377 1989

One-year follow-up of the Chicago televised smoking cessation program.

Abstract only.

Television, manuals, discussion leaders.

Television plus manual better than manual alone, other types of help didn't have significant effects.

15 other similar programs since 1984 - similar results.

[42] Robinson J P & Levy M R

POQ 50:160 1986

Interpersonal communication and news comprehension

Awareness and comprehension of a week's news related to discussions about news.

"News stories sometimes serve as a 'coin of social exchange'." This may enhance its recall and comprehension.

Regional sample of 407 adults in Washington DC, 9 stories, and national sample of 544 adults nationwide, 14 stories. May and June 1983.

Less than one-third of the news stories were comprehended.

No-one in regional sample comprehended the main point of more than five stories.

Fewer than 4% of national sample comprehended 12 or more items, none comprehended all 14.

Comprehension often greater for stories with a dramatic or human interest content.

Comprehension was influenced by:

- Education
- Age, at least up to 70.
- Sex (males better).
- Discussion, particularly of main stories.

Exposure to a greater number of news sources had a small impact.

"Talking about the news, especially about the week's "most important" national and international news, seems to have at least as powerful an effect on comprehension as mere exposure to the news media."

So worth looking for ways to stimulate or take advantage of this second stage of information flow.

[43] Wade S & Schram W

POQ 33:197 1969

The mass media as sources of public affairs, science, and health knowledge.

Results of four surveys from 1952 and 1964.

Public affairs information:

- Television more likely major source for less educated, females, non-whites, farm and blue-collar workers.
- Print media likely main source for better educated, whites, males, professional, managerial and white-collar, and higher income.

Science information:

- Most science information comes from newspapers, for all groups.

Health information:

- Mostly from print media.
- Women more than men.
- Better educated more than less.

Women expected to know about health, men about science; and respectively use print media more.

Accuracy:

- Of people able to answer science questions correctly, 82% used print as principal source.
- Print users had more specific, in-depth information.
- True across sex and education.

Frequency:

- More reading related to more health knowledge. But no relation between viewing frequency and knowledge.
- Knowledge results from interaction between education and media use.
- More educated tend to use print more as major information source.
- Media attention generates short-term increase in knowledge. When attention decreases, knowledge reverts to base level (eg, learnt at school). (How many Presidents killed in office? 37% knew after JFK assassination, 16% 19 months later.)
- Information from tv more closely related to events - vivid and dramatic. Print media for concepts and understanding.
- So print media more likely as source of long-term science and health knowledge, broadcast media for more transient knowledge.

[44] Menzel H

POQ 35:406 1971

Quasi-mass communication: a neglected area.

Mass communication:

- Uniformly broadcast
- Messages not targeted cos audiences large and heterogenous, contacts fleeting.
- Limited, delayed, and inferential feedback.
- Subject matters set in advance.
- Expertise and involvement differentials between communicator and recipient.
- Control by originating source.

Interpersonal communication:

- Tailormade messages.
- Instantaneous feedback.
- etc, opposite of mass communications.

Quasi-mass communications left out. e.g.,

- Examples. Election speakers, streetcorner orators, lunch-club speakers, sales people, missionaries, store-front information centres, literary agents, information services, etc.

Advantages and disadvantages depending on relationship to target audience, audience's level of interest and attitude to topic, extent of existing networking, etc.

[45] Wright P L

POQ 38:192 1974

Analyzing media effects on advertising responses.

Examines how different media affect response to message. 160 housewives.

The difference between (e.g.,) print and broadcast is not as obvious as appears. Difference is really one of reception environments.

Audio: temporal, compulsory rate, poor referability.

Print: spatial, voluntary rate, good referability.

Content is the source of motivational arousal; medium moderates how the arousal operates.

Print allows greater opportunity for response if the content so motivates; also better opportunity to disengage if uninterested.

Broadcast has less opportunity for involved response cos message moves on; but requires more effort to disengage.

So any effects generated by the content will be magnified by print and minimised by broadcast.

Processes of message acceptance: Receiver relates information to existing belief system by ...Cognitive counterargument; Support argument; Source derogation.

Medium can impact on: Opportunity to respond; Motivation to respond, Available responses.

Counter-argument takes more effort, so only if motivated. Support argument easier cos message contains them, source derogation requires reaction to single cue.

Print should increase level of response all over.

If people are motivated and involved in evaluating the message they counterargue the issues, if not involved they derogate the source.

The level of support argument increased for print. Involvement had little effect. Buying intention was higher from print.

Both support and counter arguments were higher in print. The net result favoured print.

Information content is the major source of receiver involvement. If the product does not naturally carry receiver involvement, it will probably be ignored in print.

The real variable might be opportunity to respond, with media being the proxy. So interactive broadcast media might be more like print.

[46] Mendelsohn H

POQ 38:379 1974

Behaviourism, functionalism, and mass communications policy.

Compares functionalist and behaviouralist approaches to mass commns research. Are we affected by the media willy nilly, or do we choose what we take from it?

Behaviouralist:

Man is malleable, reacting. Stimulus/response. Man weak, media powerful. Mainly European. Man atomised, governed by needs over wh little control, vulnerable to manipulation.

e.g., Exposure to tv harmful, exposure to school beneficial.

"Old-line mass commns behaviouralists, generally unmindful of modern gestalt psychological thought, have been plying their threadbare mass commns wares to unsuspecting publics who are turning more and more to unitary deterministic theories for guidance to the confounding perplexities of modern life: If you want to put an end to sex crimes, do away with pornography and obscenity in films..."

The behaviouralist arguments tend to censorship policies, giving them an aura of scientific legitimacy.

Evidence: Is derived largely from laboratory experiments; Assumes that content equates to stimulus (is recipient doesn't transform it); Law of the hammer (give someone a hammer, sooner or later they will strike something with it); Subjects often better educated and motivated (eg college students).

'.. naive ... to assume that the uses to wh audiences put the media and the gratifications they derive from it are monotonic, simplistic, static, and immutable, while all other aspects of human behaviour are considered multi-faceted, complex, and dynamic.

Functionalist:

Two-way flow of info between people and leaders.

Human actively chooses messages - avoids some, ignores more, and transforms few into stimuli in accordance with his own personal situation, background, experience, needs, wants, and expectations.

Message received may or may not be congruent with that sent.

... because numerous publics w varied social and psychological attributes, interests, motivations, expectations, and tastes come away from the media w differing experiences, it wd be unrealistic to formulate media policies from any given catalogue of presumed audience needs."

... current social research on the policy aspects of mass commns can, at best, point to specific wants and expectations of particular audiences that the mass media have either overlooked or neglected ..."

We need much more data on:

- (micro level) what roles the media play in the full process of socialisation.
- (macro level) insight into the integrative-disintegrative functions of the media in reln to groups and communities.

[47] Alper S W & Leidy T R

POQ 33:556 1969

The impact of information transmission through television.

Study of effects of a tv audience participation series on 4500 high school students.

The tv presentation (short dramatised snippets about activities lawful or unlawful under the US Constitution) affected both knowledge and attitudes in those who watched.

A follow-up six months later showed that both knowledge and attitudes had dissipated but not disappeared.

[48] Fejer D et al.

POQ 35:235 1971

Sources of information about drugs among high school students.

Students in Toronto (6447), Montreal (4501), and Halifax (1606). Self-reported sources of information. Divided by had used, might use, or would not use.

Where do they get info about drugs (school, family, news media, friends, personal experience)? Which has most influence?

Users got information from friends and own experience, except Montreal where media was most important.

For current non-users, news media was by far the major source. Family, church, and school all low for all groups.

Friends next (except Montreal), then church and school, family well behind.

Montreal very different from Toronto and Halifax - little from friends.

News media convinced non-users that marijuana was harmful. Own experience and friends convinced users that it was not.

"Non-users can best be reached through news media, and drug users through more personal contacts."

Possible flaws in study - Montreal bilingual and bicultural. Also, only studied how students had decided that marijuana was harmful (what influenced decision that m was safe?).

[49] Hanneman G J

POQ 37:171 1973

Communicating drug-abuse information among college students.

Study of 407 college students, 19-24, in commn courses at Uni of Connecticut.

Drug-abuse information is proliferating without any real data about its effectiveness.

"A review of the mass communication literature and its application to other fields yields little about the dissemination of public service information ..."

Often one-step model - mass effects consequent to mass exposure.

Tests various hypotheses about information sources - users and non-users of marijuana and hard drugs. Expect friends to be used where use is no big deal, professional sources for psychedelics and opiates, government agencies low use.

Results suggest:

- For cannabis info, single most important source was friends.
- For perceived "serious" drugs, professional sources were used more than friends. However users relied more on friends and own experiences (also on professional reference books) than non-users did.
- Media information may be used to resolve uncertainty
- Government's dual role as educator and enforcer reduces its credibility.

"People use media where uncertain or to form initial opinions, friends and own experience where media shows a credibility gap or where people become more confident in own opinions.

[50] Sternthal B, Phillips L W & Dholakia R POQ 42:285 1978

The persuasive effect of source credibility: A situational analysis.

Summary of studies on the effect of source credibility on attitude change.

Wide belief that high credibility elicits support, but evidence shows that credibility can have no or reverse effect.

Credibility: two components - expertise, trustworthiness.

Main effect: high credible source seems more persuasive.

However impact of other factors mitigates this.

Timing: Message more persuasive if hi cred source mentioned early, to cred source mentioned late. Tho ambiguity in data of hi cred source mentioned late.

Message variables:

Discrepancy (from receiver's initial opinion): If hi-cred source, message more persuasive with increased discrepancy; If to-cred source, moderate discrepancy most persuasive. Credibility important only when appeal is highly discrepant.

Threat: Message most persuasive when hi-cred source presents strongly socially or physically threatening message. Threat makes little difference if cred lo.

Message incongruity (with sources best interests): Makes little difference to hi-cred source, but increases persuasion of lo-cred source. Converts are effective. A two-sided message is persuasive as long as unfavourable side: Is presented first; Is well refuted; Cites only already known arguments.

Evidence: Makes little difference to hi-cred source, improves to-cred source if evidence unfamiliar.

Individual variables:

Locus of control: External - determined by chance, fate, or powerful others; Internal - attributable to own actions.

Externals more influenced than internals. Hi-cred source more influential for externals than lo-cred source; Hi-cred and lo-cred abt equal for internals.

Authoritarianism: Highly authoritarian people more persuaded by cred cues; Less authoritarian people rely less on cred cues and more on message cues.

Tho some ambiguity in data. Possible that given authoritarian indivl's intolerance for ambiguity, their judgements will be based on dominant cue. If few arguments, then credibility important, is message cue moderately complex this will dominate.

Low authoritarians employ multiple cues, use cred clue only where they have little knowledge.

Involvement: Credible source more persuasive where involvement lo, no credibility effect when involvement hi. Some ambiguity tho.

Initial opinion:

-Extremely negative - hi-cred source more influential than to-cred.

-Moderately negative - no systematic effect

-Favourable - to-cred more persuasive (may be same as less involved).

Own behaviour: Previous self-endorsement of action, if made salient, and esp is compliance is voluntary, can make to-cred source more persuasive than hi-cred source.

Two explanatory theories - cognitive response and attribution.

Cognitive response: Individual counterargues or internally agrees with message.

Strength of credibility cue interacts with strength of initial position to affect type of response. triggered by message. Involvement, locus of control, and authoritarianism also mediate the process.

Attribution theory: People come to know their attitudes by inferring them from their own behaviour. Lo-cred source augments attribution to internal causes and so reinforces favourable attitude. Unexpected messages more persuasive.

- [51] Atkin C K & Gantz W** **POQ 42:183 1978**
Television news and political socialisation.
 TV news is a meaningful source of political knowledge for children and serves to arouse interest and curiosity about political affairs.
- [52] O'Keefe M T** **POQ 35:242 1971**
The anti-smoking commercials: A study of television's impact on behaviour.
 Television is limited in its impact on behaviour. Only those who were already inclined to give up smoking reported anti-smoking commercials as having any effect on them.
 People can live with dissonance. The majority acknowledged health dangers, but were prepared to live with them.
- [53] Andreoli V & Worchel S** **POQ 42:59 1978**
Effects of media, communicator, and message position on attitude change.
 Experiment involving manipulation of source trustworthiness and medium.
 Television was the most effective medium for the trustworthy source, but the least effective for the untrustworthy source.
- [54] Murch A W** **POQ 35:100 1971**
Public concern for environmental pollution.
 Questionnaire (205)
 73% believed that environmental problems could be solved.
 Nearly half didn't know what that solution might be.
 39% were willing to continue a tax surcharge to reduce pollution.
- [55] Sapolsky H M** **POQ 33:240 1969**
The fluoridation controversy. An alternative explanation.
 The majority of people are educated enough to be aware of the fluoridation issue, but don't regard themselves as expert enough to decide it.
 Disagreement amongst credible people, especially when opposing arguments are dismissed rather than argued, create confusion. Therefore people vote for the safest course, ie, anti-fluoridation.
- [56] Placek P L** **POQ 38:548 1974**
Direct mail and information diffusion: Family planning.
 Direct mailing of a family planning booklet was effective in generating discussion and diffusion of the knowledge.
 Had some effect on increasing knowledge.
 Receipt of the literature did not significantly enhance people's status as opinion leaders on the issue.
- [57] Klapper H L** **POQ 42:426 1978**
Childhood socialisation and television.
 Children are able to distinguish between television fiction and real life, although that capability varies quite a lot with individuals.
- [58] Lau R L, Brown T A & Sears D O** **POQ 42:464 1978**
Self-interest and civilians' attitudes toward the Vietnam war.
 Self-interest was not a big factor in determining individuals' policy preferences and attitudes to the Vietnam war.
 "Our results suggest that it is the symbolic meaning of an issue, rather than its personal impact, that is critical to the crystalization of public opinion on it."
- [59] Inglehart R** **POQ 42:568 1978** **Princeton Uni Press NJ 1977**
The Silent Revolution: Changing values and political styles among Western publics. (review)
 Review of Inglehart's thesis on materialism vs post-materialism
- [60] Rubibn D A & Sachs P S** **1973**
Mass Media and the Environment: Water resources, land use and atomic energy in California. (rev)
 The educational system doesn't keep pace, leaving the mass media to educate the public about scientific and technological challenges.
 Media don't handle environmental issues well either.
 Need better-trained environmental specialists and better material from scientists etc.

[61] Rohrbaugh J & Wehr P

POQ 42:451 1978

Judgment analysis in policy formation: A new method for improving public participation.

Four major reasons why conventional communication between citizens and public sector are inefficient: Human judgement is complex; covert; and inconsistent, and our belief in what our own priorities are is faulty.

Describes a weighting and clustering method for identifying priorities.

[62] Weintann G

POQ 55:267 1991

The influentials: Back to the concept of opinion leaders?

Examines a new measure to identify opinion leaders - the PS scale.

For reviews of opinion leadership studies see K Koppler "Opinion Leaders", Heinrich Bauer Verlag Hamburg 1984.

Looks at influence rather than two-step model of opinion leadership.

Influentials:

- Concentrated in higher social-economic status levels.
- Active in several topics, with considerable overlap.
- Mass media usage about the same as anyone else.
- Influencability a continuum.

[63] Tichenor P J, Donohue G A, Olien C N

POQ 34:159 1970

Mass media flow and differential growth in knowledge.

When there is more news on a topic, the better educated learn more than the less educated.

This knowledge gap seems to explain failures in mass publicity.

Case study - Cincinnati Plan for the United Nations (Star S & Hughes H). Persons reached tended to be educated, younger, men.

Better educated more likely to be interested.

Better educated are more likely:

- To have better reading and comprehension abilities.
- To be already aware of the issue.
- To have wider social contacts.
- To selectively accept and retain information.
- To use the print media (where much science and public affairs news is disseminated) more.

Television may close the knowledge gap - research to be done.

[64] Blonna R, McNally K, & Grasso C

JHCM 10/1:53 1990

Health care marketing minicase.

Family planning agencies in New Jersey used public service advertisements on mass transit. Also posters, flyers, and a toll-free hotline.

Seemed to be effective.

[65] Kotler P and Roberto E

1989

The Free Press NY

Social Marketing

Photocopy has:

Contents

Chapter 1 - The nature and role of social campaigns to change public behaviour

Bibliography

From chapter 1 - Conditions associated with successful campaigns (various writers):

Lazarsfeld and Merton:

Monopoly. No contrary messages (though this not usually possible)

Canalisation. Channel existing attitudes or behaviour rather than create new ones.

Supplementation. Mass media supplemented by face-to-face communication.

Wiebe:

The force. Intensity of recipient's motivation, arising from predisposition and from intensity of the message.

The direction. Presence of means of carrying out campaign objectives.

The mechanism. Existence of agency, office, or retail outlet that enables individual to translate motivation into action.

Adequacy and compatibility. Of the agency.
Distance. Recipient's estimate of energy and cost to comply.

Rothschild:

Situation involvement. Salience and interest.
Enduring involvement.
Benefits/reinforcers.
Costs.
Benefit/Cost
Pre-existing demand. Message fits wider objectives.
Segmentation. Tailor message to specific group.

(Much useful information all through - a good book for Doc to have.)

[66 Royte E

Outside 8/93

Holy eco-crisis! It's Barbara Pyle!

Barbara Pyle is VP of environmental policy for Turner Broadcasting System.

"Pyle has accomplished the nearly impossible: making environmental issues sexy enough for television. She does this by telling a story, finding a hero, pulling in viewers with appeals to human decency and compassion, and often skirting some of the facts."

(I think there is an interactive - maybe Internet - angle to the TBS environmental programmes too. But it's not mentioned in this article.)

[67] Cook F L et al.

POQ 47:16 1983

Media and agenda-setting: Effects on the public, interest group leaders, policy makers, and policy.

Prior knowledge of a tv expose of health care fraud. Effects measured on public, interest group leaders, and policy officials.

Public: Viewers saw health care and its fraud as a more important issue than did non-viewers.

Policy makers: Government policy makers were influenced in their perception of the importance of the issues, and in their inclination towards policy action. However their priority ranking of the issue did not change.

Interest group elites: Opinions did not change - probably because they will be already knowledgeable about and committed to the issues.

The impact of the investigation on policy was the result of journalists working with policy-makers, bypassing the public.

[68] Davison W P

POQ 47:1 1983

The third person effect in communication

Carried out some informal experiments to measure the syndrome of:

"I haven't been influenced by that, but they probably have been."

Cites several possible examples of this.

[69] Zukin C & Snyder R

POQ 48:629 1984

Passive learning: When the media environment is the message.

Knowledge can be picked up passively, without motivation.

New Jersey residents received New York tv in the north and Philadelphia tv in the south. The study tested respondents' recall of local election candidates.

Clear evidence of substantially increased recall in the media-rich environment, even for those with low political interest.

[70] Gill J D, Crosby L A, & Taylor J R

POQ 50:537 1986

Ecological concern, attitudes, and social norms in voting behaviour.

Attempts to identify the connection between ecological concerns and behaviour.

Densely statistical. Seems to be saying that ecological concerns affect behaviour, but indirectly and through other variables.

[71] Leff D R, Protes D L, & Brooks S C

POQ 50:300 1986

Crusading Journalism: Changing public agendas and policymaking agendas.

See also [22] and [26]

Third in series of studies of agenda-setting effects of news media investigations. TV series on police brutality in Chicago.

People who saw the series significantly increased their views of the importance of police brutality as an issue.

The series had less impact on the knowledge of viewers.

Policy makers showed no significant change in attitude, but some increases in factual knowledge and some increase in their assessment of how important the public deemed the problem to be.

Comparison of the three studies:

Studies 1 & 3 were tv reports, and showed strong attitudinal changes. Study 2 was newspaper, and showed limited changes. This is consistent with the notion that the impact of tv is greater than newspapers when the subject is dramatic and the event is short-term.

In studies 1 & 3 the public had little prior knowledge or interest in the issues. In study 2 (rape) the public already had concerns and may have reached a saturation.

Study 3 focused on specific offenders. Study 2 was about a more general, ongoing problem.

Study 3 coincided with a mayoral campaign and became an issue on it.

Study 1 targeted a few operators, who were already being investigated. Study 2 was largely informational and statistical. Study 3 had unambiguous villains and victims, apparently irrefutable evidence, and fairly clearcut solutions.

"In sum, the stylistic form of an investigative report - equivocal or nonequivocal - may affect profoundly its degree of impact.

[72] Shapiro R Y & Mahajan H

POQ 50:42 1986

Gender differences in policy preferences: A summary of trends from the 1960s to the 1980s,

There are some significant and continuing differences in the attitudes of American women and men to a range of issues. In particular, there are big differences on issues of force and violence, and on compassion issues.

However there is a lot of ambiguity about how this breaks down. The overall gender differences seem to hide a wide range of individual responses, possibly because the similar attitudes arise from different conceptual starting points.

The number of "Don't knows" has decreased, suggesting a generally higher involvement in issues by women.

[73] Moore D W

POQ 51:186 1987

Political campaigns and the knowledge gap hypothesis.

The concept of the knowledge gap says that the effect of the mass media in transmitting political messages is to increase the gap in knowledge between high- and low status voters.

The existence of an initial difference in knowledge and participation is well established.

Studies are inconclusive as to whether this gap increases with increased information.

This study showed the knowledge gap remaining stable on a simple, clearcut issue, and increasing on a more complex one.

However, diffusion of information happens on an S-curve, with a slow beginning, a surge, then a levelling off. The authors speculate that the higher-status (by education) voters learned at a faster rate initially, but that given time the lower-status groups will catch up. Therefore the timing of the measurement is critical.

[74] Davison W P

POQ 53:440 1989

Mass media, civic organisations, and street gossip: How communication affects the quality of life in an urban neighbourhood.

Gannet Centre for Media Studies, Columbia University, 1988

Looks at a neighbourhood in the Bronx.

The three parts of the communication network - interpersonal, organisational, and mass media-complement and supplement one another.

-Person to person contact is important. Activists mobilise others, carry information, and facilitate the flow of information.

The more specialised the information, the more likely the information is disseminated by personal or organisational channels.

[75] Price V

POQ 53:197 1989

Social identification and public opinion: Effects of communicating group conflict.

Experiment with 126 Stanford students

Tested a model of group-mediated mass media impact on individuals:

Individual's opinions are in many ways dependent, for both form and content, on the larger context of public debate.

"In the course of deciding their stand on an issue they are not so much deciding their own opinion ... but instead interpreting the issue through their relationships to broader social movements and emerging opinion groups ..."

So the public opinion process is not one in which many persons independently decide on a reasoned course of action, but one in which the public organises into alternative opinion groups, and then defines and expresses their opinions primarily through their relationship with those groups.

The mass media may exert much of their influence by contextualising public issues - representing the way people and groups are responding to issues.

Related issues: "Spiral of silence" - people will refrain from expressing a minority opinion; tendency for people to perceive a false consensus for the own views. [Also tendency to believe that *they* are more influenced than me.]

Suggests that original beliefs, attitudes, and opinions will become more consistent over time.

Self-persuasion through social identification. More a mechanism for opinion formation than for opinion change. Once a person has decided upon an opinion, may confirm and defend them rather than test.

Probably stronger when person has strongly valued identity in group membership.

Assuming news reports emphasise conflict, then a three-step model:

1. Social categorisation. Recipients see themselves as part of a group when considering issue.
2. Stereotypical processing. Perceptions of group opinions are polarised - disagreements between groups accentuated, differences within groups discounted.
3. Behavioural conformity. People express opinions consistent with their exaggerated perception of their group's norm.

Generally, the study supported the model.

[76] Back K W

POQ 52:278 1988

Metaphors for public opinion in literature.

The current metaphor for public opinion is that it is the sum of individual, personally derived opinions. The standard research method - the survey interview - corresponds to this. It is modelled on and validated by the two actions which represent the most individualistic actions of modern society: the buying decision and the secret ballot.

Other metaphors are possible. In particular, some societies would expect a homogenous expression of social opinion. Shakespeare, Machiavelli - public opinion as a malleable but dangerous mass.

[77] Jordan D L

POQ 57:191 1993

Newspaper effects on policy preferences

Different actors or news sources have differential impacts on public opinion.

Experts and commentators are influential.

Newspaper (New York Times): an expert news story was associated w almost two percentage points of opinion change.

Television news One story produced almost 3.5 percentage points of opinion change.

Fairly limited study - not to be taken as too definitive.

[78] Beniger J R

POQ 51:s46 1987

Toward an old paradigm. The half-century flirtation with mass society

Surveys the study of mass opinion since 1937.

From 1920s to 1940s and on - strong impact of mass society model of public opinion, i.e., the engineering of collective opinions that could influence public behaviour and policy decisions.

War propaganda studies reinforced it.

Klapper 1960 -- var studies indicated mass commun'n has minor impact of personal influence.

Later 1960s - if people not politically astute and have no specific policy agenda, then central'd media might have effect.

Through to 1980 - mass society models of atomised individuals at mercy of centralised media:

-agenda setting - minimal impact on opinion, but influence what public has opinions about, -

spiral of silence - set agenda, plus influence indvl's inclination to speak up by suggesting wh views meet with social approval;

-cultivation analysis - public receives from infancy a socialisation to a common symbolic environment. Once frm family etc, now from mass-produced images and messages under central'd control.

Current work focuses on public opinion as continuous public process. Looks at interpretive structures with which the media "frame" public events, and which people often adopt to understand policy questions. How we structure our view of the world.

Concept of "fabric of hegemony" - web of ideas, social relations, and institutions woven by intellectuals, incl. journalists. Shift from public opinion as aggregation of indvl attitudes by pollsters, to means by wh we control and are controlled thru public commun'n.

Leads to shift in research from advocates to prof'l communicators. Not passive gatekeepers, but active shapers or framers of opinion.

But also, audience no longer passive. People construct and modify their understanding in an environment that is constantly offering them pot'l schemata, suggesting how an issue is to be understood and what should be done about it. We adopt a schema rather than construct it, fleshing it out over time. Mass media messages are not imprinted on the minds of media audiences in the precise manner in wh they are offered. Rather, audience members condense the offerings in their own ways, select items of interest, and integrate them into their own thinking.

Party labels provide a critical cue for cognitive filtering of political info. Indvls maintain a protective net in the service of existing predisposition.

By 1980 - paradigm of cognitive processing, media framing, and active audience engagement.

Include concepts of:

-uses and gratifications - audience processes info in pursuit of indvl needs.

-knowledge gap - info creates cognitive structures that need fleshing out, effect is that gap btwn knowledge-rich & knowledge poor might widen.

-convergence and co-orientation - indls exchange info, so partially converging on shgared schema.

-political cognition and audience decoding both focus on microdynamics, and relate to "interpretive communities" wh can create social controls and then get fed back by media framing.

Public opinion study seems to have returned to an interdisciplinary arena of a complex feedback system.

[79] Katz E

POQ 51:S25 1987

Communications research since Lazarsfeld

Much shortened version of 9th Paul F Lazarsfeld Lecture, Coloumbia Uni, April 16 1987. Full text from Gannet Centre for Media Studies, Columbia Uni, NY NY 10027

Looks at commmunications research as a set of arguments with P Lazarsfeld, who as Director of Bureau of Applied Social Research (BASR) was working on the role of mass commns (esp radio) in making decisions - voting, buying, going to movies. 1940-60.

Effects of media are mitigated by selective attention, perception, and recall. These are functions of predisposition and circumstance, e.g., age, family history, political affiliation.

The indvl's primary group is network of info and source of social pressure.

Studies of BASR assessed short-run effects of mass commns in context of campaigns. Still valid. In spite of the blind belief of advertisers, politicians, some academics, and the public that media campaigns are capable of inducing massive change in opinions, attitudes, and actions - always somebody else's, not ones own (Davison, 1983 [ref 681]) - the research evidence continues to say otherwise.

Three more recent paradigms propose theories of direct and/or powerful effects:

-institutional - media tell us what to think about.

- critical - media tell us what not to think, or think about.
- technological - media tell us how to think, or where to belong.

Institutional (political, cognitive)

Emphasises role of media in transmitting information in political system.

Originated in schools of journalism, upgraded to schools of commns - academics uneasy about concept that mass commns lacked influence. So emphasised role of journalism to provide info and frame agendas rather than to persuade.

Critical

The lack of apparent effect of the media is just the media maintaining the status quo. The mission of the media is to tell us what not to think, or think about. Elites set agendas and specify choices, or offer the illusion of freedom by offering false choices (Pepsi-Cola vs Coke). The media produce the illusion of classlessness and consensus by ruling certain positions out of order.

Researchers study relationship between media professionals, sources, and bosses, and also the way in which audiences decode the messages. Concept of spiral of silence for example imply high degree of dependence on mass media as definers of social reality.

Technological

e.g., McLuhan. The technologies of communication define our connections irrespective of their messages. Technology is the causal agent for changes in social organisation. Challenges commn research to explore influence of media on organisation, as well as on opinion and ideology.

The limited effects model had two mediating variables - selectivity and interpersonal relations. These have spun off separate strands:

- * selectivity - uses & gratifications - audience decoding.
Emphasis on meaning.
Internal "negotiation" w the message; interaction in interpretive communities wh in turn act as gatekeepers that determine how much seeps into the culture.
- * Interpersonal relations - diffusion of innovation - social networks.
Emphasis on flow.

Methodological and financial difficulties of studying long-term effects, e.g., radio on musical taste, development of cynicism from advertising, effect of film editing technology on how we see the world.

Connects media research with other disciplines studying patterns and processes thru wh influence spreads (archaeology, anthropology, folk-lore, religious history, marketing, epidemiology).

Network studies. Media play a multiple role as providers of the content wh flows thru interpersonal networks, as links btwn those networks and remote locations, and, to a certain extent, as determinants of the structures of the networks.

Communications research and studies of public opinion have become disconnected.

pS35 "omnipotent media brainwashing defenseless masses"

[80] Nimmo D & Sanders K (Eds)

1981

Sage, Beverly Hills

Handbook of Political Communication

see esp McCombs M "The agenda-setting approach."

cited in [20] "McCombs has written the most sophisticated review of the various methodologies used to explore agenda setting."

[81] Berger C & Chaffee S (Eds)

1987

Sage, Newbury Pk CA

Handbook of Communication Science - Contents

Part I: Overviews

1. The study of communication as a science. (Berger & Chaffee)
2. Communication research: A history. (Delia)
3. What communication scientists do. (Chaffee & Berger)
4. Beyond science: Humanities contributions to communication theory. (Farrell)

Part II: levels of analysis

5. Levels of analysis: An introduction. (Chaffee & Berger)
6. The individual's place in communication science. (Hewes & Planalp)

7. Interpersonal communication: Definitions and fundamental questions. (Cappella)
8. The network level of analysis. (Monge)
9. The macrosocial level of communication science. (McLeod & Blumler)

Part III: Functions

10. Functions of communication: An introduction (Chaffee & Berger)
11. Functions of communication: A nonfunctionalist overview. (McQuail)
12. Language, social comparison, and power. (Giles & Wiemann)
13. Nonverbal signals (Knapp, Cody, & Reardon)
14. Socializing functions. (O'Keefe & Reid-Nash)
15. Persuasion. (Miller)
16. Communication and conflict. (Roloff)

Part IV: Contexts

17. Contexts of communication: An introduction. (Chaffee & Berger)
18. Family processes: System perspectives. (Bochner & Eisenberg)
19. Marital interaction. (Fitzpatrick)
20. Communication and children. (Wartella & Reeves)
21. Consumer behaviour. (Ward)
22. The health care context. (Pettegrew & Logan) [ref 82]
23. Organisational assimilation. (Jablin & Krone)
24. Professional mass communicators. (Ettema, Whitney, & Wackman)
25. Public opinion processes. (Price & Roberts) [ref 831]
26. Communication campaigns. (Roberts & Storey) [ref 841]
27. Cross-cultural comparisons. (Gudykunst) [part of as ref 851]

Part V: Conclusion

28. Epilogue. (Chaffee & Berger)

[82] Pettegrew L S & Logan R

1987

The Health Care Context (in *Handbook of Communication Science* (81))

Chapter cites many case studies of mass media effectiveness.

Health issues have some unique features. Hierarchical and institutional. The information recipient is also the "problem". Personal interaction with professionals is common and important.

The health belief model: "Health" can be promoted according to individual's perception of susceptibility to illness, severity of threat, and benefits of action; mediated by motivation and action cues.

In most US newspapers, health and medicine = 3% of news and entertainment space.

Research into effectiveness of mass media is ambivalent. Three main study areas: smoking, drug and alcohol, and cardiovascular.

Smoking studies variously suggest: campaigns are effective; campaigns effective in changing awareness and attitudes but not behaviour; hard to determine effectiveness of campaign of interpersonal communications. More research needed.

Several alcohol and drug campaigns were unsuccessful in impacting awareness or attitudes.

Possibly because campaigns did not supplement mass media with inter- and intra-personal reinforcement.

Heart disease campaigns are the most extensively studied. Stanford Heart Disease Prevention Program, Minnesota Heart Health Project, and others.

Campaign effective when mass media campaign supplemented by interpersonal instruction.

Proportions of these may vary according to the behaviour change sought.

Model program developed (Farquhar etc in *Handbook of Behavioural Medicine* 1984).

"Little media" - pamphlets, brochures, and specialised publications - effective in increasing knowledge (papers presented to 1985 convention of International Communication Association.)

Research about the utilisation of mass media was centred on the utilisation of radio, tv, newspapers etc to create persuasive messages. Dearth of research about how public acquires health knowledge or is motivated to attend to public health campaigns. Health communication research should encompass the interaction of interpersonal, intrapersonal, and mass media communication upon cognitive, affective, and conative states.

Though some studies reflect more holistic approaches, including: opinion leaders, network analysis, impact of family and community type on motivation, and various conceptual models.

In most studies of mass media health commn the audience's expectations of the mass media and the quality of the news or programming have not been considered.

Little research on health and beauty product advtg cf public service campaigns.

False concept of how scientific or health knowledge is transferred. Assumed to be value-free and objective. But social values interact during the process.

[83] Price V & Roberts D F

1987

Public Opinion Processes (in *Handbook of Communication Science* (81))

Focus on public opinion as a social process and a communication process. A complex of commn processes, involving inter-level relations over time, where people, groups, and organisations play differentiated roles.

1. Conceptual probs in defining public opinion.
2. Nature of opinion processes at indivl, group, and orgn levels.
3. Processes of public opinion formation and change in larger society.

Conceptualising public opinion:

- "Aggregation of indivl opinions" "one man / one vote" model, vs "group mind" model. Need to consider aspects of both.

- Crowd - irrational, imitative. Conditions of excitement and physical unity. People act according to own needs, without regard for collective concern.

- Public - cooperation and discussion. Process view.

Implications of process view:

- The issue creates the public.

- Public opinion not the distribution of opinions, but a complex function of processes where disparate ideas are expressed, adjusted, and compromised en route to collective determination of a course of action.

Defining the public:

- Will ultimately incl lobbyists, interest groups, fringe. Often seen as defined and finite. No. Size and composition changes through issue life cycle.

The individual level:

Indvl opinion arises out of public commn, consisting mainly of a person's ongoing effort to organise both cognitive and behavioural responses to a public issue.

Opinion: overt responses to specific issue, reasoned choice.

Attitude: More basic tendency to respond to a general class of stimuli, immediate and intuitive.

Opinions incl perception of comon well-being as well as pvte desires.

Discn shapes both public and pvte opinions.

For many issues, small communctg publics develop within larger population of minimally interested.

Mental frameworks:

- Order is not necessarily rational.

- Instead of using overarching ideology or model, people morselise.

- A few salient issues may determine an indivls opinion, eg nuclear power supporters focus on economics, opponents on safety.

The group level:

- Group opinions are not simple aggregations or averaging: Discussion may lead to increased polarisation; and group members may be susceptible to majority pressure.

- Group opinion is an unfolding of group-mediated perception and cognition. At least three phases: Disclosure of disagreements; Alignment with people of similar views; Collective bargaining towards resolution.

- Members develop perception of how group is organised. Not just deciding opinions, also defining social allegiances.

- Mass media coverage structures the public into opinion factions and social alliances.

So each member of public experiences two kinds of commn:

- Interpersonal, w groups of acquaintances (inside public)

- Contact via mass media w collective movements, orgns, and personalities (outside public).

- The mass media provide the background agst wh the public opinion process is played out.

- People's perceptions of group opinion help them to understand public opinion and guide them in making their own decisions.

- The process of public opinion translates ideas and opinions into social relationships.

Interpersonal opinion - people relate as unique individuals. Other - relate in terms of stereotypical social roles. Public opinion can generate over-simplification and therefore polarisation.

Self-identification with a group seems to prime people to impose schematic group categorisations on information they encounter.

Perhaps we are discovering that many people, in the course of deciding their stand on a public issue, are not so much deciding their own opinion (where they stand), as deciding on their social loyalties (with whom they stand).

Actors and media:

- Political actors: Small group of committed people. Salient issue (food shortage) may require low threshold of mass media attention. High threshold issues (Watergate) need sustained media attention to break into public debate.

- Interested public: Somewhat attentive, and at least acquiesce.

Public opinion process largely opinion between political actors who are restlessly pursuing public recognition and support for their views, and members of the interested public who are trying to understand the issue and decide whom to support. They communicate principally via the language provided by the mass media.

Two current research trends:

1. Media setting the stage, e.g., agenda setting

- Deficiencies: Misses elites; Misses reciprocity.

- Media impacts not so much on importance of issue to self, as perception of broader social implications.

2. Media providing looking glass, e.g., poll-taking.

- Pluralistic ignorance: ignorant of broad covert agreement. (Breakthrough can appear to be rapid conversion.)

- Spiral of silence.

Third person effect: people assume others will be more affected by mass media than they are.

[84] Rogers E M & Storey J D

1987

Communication Campaigns (in *Handbook of Communication Science* (81))

1. Define campaigns.

2. Three eras of research, examples.

3. Conclusions: Effective design and implementation.

"But little scholarly work has been devoted to identifying how a successful strategy in one campaign can be generalised to other campaigns."

Definition: A campaign intends to generate specific outcomes or effects, in a relatively large number of individuals, usually within a specified period of time, and through an organised set of opinion activities.

Objectives: Inform, Persuade, Change behaviour.

Often use: Mass media for disseminating information, creating awareness, and increasing knowledge on large scale;

Interpersonal channels for forming, changing, and reinforcing attitudes, mobilise overt behaviour.

Minimal effects era:

•Media changed few minds. Worked thru opinion leaders.

•Selectivity processes: Selective exposure - listen to ...; Selective perception - interpret

...; Selective retention - remember ... messages in terms of previous attitudes and experience.

Cincinnati UN campaign failure - information grows interesting when it is functional, that is, when it is so presented that it is seen to impinge upon one's personal concerns. (Star and Hughes, 1950)

Campaigns can succeed era:

Mendelsohn (1973) - strategies for success -

•Get opinion scientists to evaluate and assist during campaign.

•Set reasonable goals. Expect few to change overt behaviour, esp if originally poorly informed or uninterested.

•Segment audience.

•Use interpersonal channels

Moderate effects era:

•Attention to intermediate effects, e.g., status conferral, agenda-setting.

- Attn to small but overt behaviour changes, e.g., attack heart disease by focusing on reducing obesity, stress, lipids, and smoking.

- Still tends to linear model - determines what message will be and tries to deliver to target audience.

Getting away from linear model ... Focus on pairs of communicators, process is reciprocal act of expression and interpretation, process of accommodation.

Commn operates within a complex social, political, and economic matrix, can't be expected to generate effects all by itself.

Multiple channels reinforce each other and can carry different types of information.

Many campaigns are still very much persuasion-oriented and still employ for the most part a top-down strategy.

A number of successful campaigns have specifically tried to stimulate interpersonal contact and to activate interpersonal commn networks.

Generalisations:

- Widespread exposure to campaign messages is a necessary ingredient in a communication campaign's effectiveness. i.e., must first reach the audience.

- Mass media can play an important role in creating awareness-knowledge, stimulating interpersonal commn, and recruiting indls to participate.

- Interpersoanl commn thru peer networks is very important in leading to and maintaining behaviour change. While the mass media may be effective in disseminating information, interpersonal channels are more influential in motivating people to act on that information.

- The perceived credibility of a commn source or channel enhances the effectiveness of a commn campaign. Peers are more likely to be considered trustworthy than professionals or experts, but professionals are more likely to be considered competent.

- Formative evaluation can improve the effectiveness of campaigns by producing messages that are specific to the desired behaviour change.

- Campaign appeals that are socially distant from the audience member are not effective.

- Campaigns promoting prevention are less likely to be successful than those with immediate positive consequences.

- Audience segmentation can improve effectiveness by targeting specific messages to particular audiences.

- Timeliness and accessibility of media and interpersonal messages help success.

A survey of the campaigns literature reveals a large body of research tenuously linked by a few general principles but without many overarching generalisations or theories.

[85] Gudykunst 1987
Cross-cultural comparisons in *Handbook of Communication Science (81)*
Sage, Newbury Park CA.

Tables of four indices for 40 countries:

- Power distance
- Uncertainty avoidance
- Individualism
- Masculinity

[86] Levin L S SP Summer 1987
Every silver lining has a cloud: The limits of health promotion.

Professor of Public Health at Yale

Dr S Penfold presented paper at 1981 First Canadian Conf in Health Promotion ... professional and governmental enterprises in health promotion were based on some serious conceptual, operational, and ethical flaws.

Lancet - P Skrabanek: health promotion / disease prevention movement ideology totalitarian, ethics perverse.

Professional health promoters could slip (have slipped?) into role of health vigilantes, pressing for acceptance of health as life's highest goal ... prerequisite for good citizenship ... punishment (guilt, rejection, isolation, taxation) for those who fail to comply.

Factors protect public from over-zealousness: individual self-determination; cultural diversity; ammunition of promotion not wholly reliable.

Apx half-life of health fact is four years. So confusion abt who and what to believe, diminishing effectiveness of messages. Leads to higher doses of hype, and to increased desensitisation.

Proposes approach based on three emphases:

-Protect public interest

The vast propn of health-promoting activity is personal (not political), spread thru social channels and fueled by commercial interests.

Little resource that monitors health promotion. No stept to encourage a questioning public attitude toward the often glib advice offered by self-styled experts.

n Promote equity in self-determination and indvl action

Middle-class dominates health-conducive life-styles (e.g., smoking). Propose strategy focussing on reducing structural barriers to a health-promoting life. Relatively few structural hazards impact on many illnesses.

Information presented to public professionally biased.

Inappropriate definition of health. Health promotion efforts for disabled.

-Attend to primacy of non-health social resources

Tragic that health promotion emanates from the health sector. A small rise in the educational or economic level for an individual or population has a far greater effect on health than all the so-called health resources combined.

Restrain enthusiasm for vistom-blaming and quick fixes in favour of more ecologically sound and long-term development.

Health as a concept is boring. Consider health as an addiction, as an infectious disease, as big business. Health non-science. The political mood of health - intolerance of deviant groups e.g., smokers, overweight.

Several citations.

[87] Winter J P and Eyal C H

POQ 45:376 1981

Agenda setting for the civil rights issue.

Compared gallup polls "What is the most important issue facing the American people today", 1954-76, with an analysis of front-page stories in the New York Times six months prior to each poll.

Found statistically significant agenda-setting effects.

Suggested it supports Zucker and contradicts Stone, in that recent media emphasis rather than cumulative effects over time leads to agenda-setting impact.

Stone G: "Cumulative effects of the media." Paper presented at the Syracuse University Conference on Agenda-setting, NY, 1975.

Zucker H G: "The variable nature of news media influence." In Ruben B D (Ed) *Communication Yearbook 2*. Transaction Books New Brunswick NJ 1978.

[88] MacKuen M & Coombs S (Eds)

1981

Sage, Beverly Hills

More Than News Media Power in Public Affairs

see esp. MacKuen M B "Social communication and the mass policy agenda." cited in 1671 An 18-year study of mass media emphasis, citizen concerns, and real-life indicators.

Thorough-going development of agenda-setting, with detailed results of studies.

[89] Costanzo M et al.

AP 41/5:5211986

Energy conservation behaviour: The difficult path from information to action.

Most energy conservation prgrammes based on either an attitude-change model (we believe therefore we do), or a rational-economic model (I do becuase it is in my ineterest).

Real life is more complex. Several psychological and real-world variables.

Makes several suggestions. In particular, use personal interaction / social networks.

[90] McCombs, M

1981

The Agenda-setting Approach (in Handbook of Political Communication (80)

see [80] Handbook of Political Communication

[91] Leeming F C et al.

JEE 24/4:8 1993

Outcome research in environmental education: A critical review.

Analysis of 34 environmental education studies that looked for impact on knowledge, attitudes, or behaviour.

Most of the studies were informal and rather flawed in design.

More and better research needed.

[92] Kepplinger H M and Roth H

POQ 43:285 1979

Creating a crisis: German mass media and oil supply in 1973-74.

Mass media reporting of a potential oil crisis, though inaccurate, created one. Conspiracy theories developed better currency than economic analysis.

[93] McKenna R

HBR 69/1:65 1991

Marketing is everything.

Old-style advertising was "monologue".

Mass production used to comprise making many identical items, standardising for economy.

Manufacturing technology now allows "mass customisation". Likewise, communications with customers/clients need to be customised and specific.

To do this, it is necessary to think interactive, dialogue. Talking "at" customers is no longer useful.

[94] Troia-Griffin T

CDRW Feb 94

CD-ROM reviews

Reviews two titles from Sierra Discovery Series. "Of the many situations Adam faces during his underwater adventure, nearly all teach environmental ethics and responsible ecological practices."

(Also a review of National Parks of America".

[95] Finger M IU

CN NH 4 1993

"Does environmental learning translate into more responsible behaviour?"

Newsletter of the Commission on Education and Communication, IUCN (World Conservation Union).

Result of four year research on the awareness of environmental problems in Switzerland.

Feeling that environmental problems are overwhelming, and motivation to learn derives from fear.

Nature experiences and activism are positive in leading to action. Experiences of catastrophes develop fear and anxiety and for these people, learning substitutes for behaviour.

[96] Ewles L & Simnett I

1985

Wiley NY

"Promoting health: a practical guide to health education.

A practical-based guide for practitioners.

Tables of contents and two chapters photocopied:

Ch3: Five approaches to health education.

Medical and behaviour change approaches

Educational approach

Client-directed approach

Social change approach

Ch7: Planning for health education.

Identify consumer and their characteristics

Identify consumer needs

Decide on goals for health education

Formulate specific objectives

Identify resources

Plan content and method in detail

Plan evaluation methods

Action!

Evaluate.

Principles could easily be translated to conservation.

[97] Genova B K L & Greenberg B S

POQ 43:79 1979

Interests in news and the knowledge gap.

The original knowledge gap hypothesis proposed that people of higher education and socio-economic status acquired information faster.

However this study suggests that the real variable may be interest - education and SES having an impact on this.

Two components of interest - perceived usefulness to oneself, and perceived usefulness to one's social milieu.

Self-interest did not have a strong impact (perhaps because people talked with others about subject with a social interest?).

Study bears this out. Suggests a need to identify the interests of the information-needy segments, target material for them, and evaluate.

[98] Welbacher W M **POQ 34:216 1970**

What happens to advertisements when they grow up.

Study of consumer response to advertising in tv, radio, newspapers, and magazines.

Most adverts just pass people by.

Informativeness and entertainment are short-lived. Annoyance and offense are cumulative.

Messages get stale very fast.

Recommend: continuous refreshment, segmentation, proliferation.

[99] Black J S **POQ 46:169 1982**

Opinion leaders: Is anyone following?

Some people change their opinions earlier than others. But this may be just a pace of learning issue, not one of opinion leadership. This study doesn't resolve it.

[100] Ettema, J S et al. **POQ 47:5161983**

Knowledge gap effects in a health information campaign.

Various studies support the knowledge gap hypothesis. However others find a narrowing of the knowledge gap.

It could be to do with sort of knowledge that is typically disseminated by the mass media and measured by researchers - basic news and current affairs. This may be of more interest and use to individuals of higher socio-economic status.

Where motivation to learn is high, the knowledge gap may be narrowed.

[500] Star S A & Hughes H G **AJS 55:389 1950**

Report on an educational campaign: The Cincinnati plan for the United Nations. cited in [84] etc.

[501] Wright P **JMR 10:53 1973**

The cognitive processes mediating acceptance of advertising.

[502] Krugman H **POQ 30:349 1967**

The measurement of advertising involvement.

[503] McClure R & Patterson T **JCOM 26:23 1976**

"Print vs network news

cited by Wade & Schramm (431 - impact of tv vs newspaper

[504] Graber D **1980** **Congressl Qtly Press Wash DC**

Mass Media and American Politics

[505] Finnegan J & Loken B **1985** **Intl Commn Assn**

The effects of direct mail on health awareness and knowledge in community heart health campaigns.

cited in [82]

paper presented to the Health Communication Division of the International Communication Association Convention, Honolulu.

Leaflets and "small media"

[506] Pavilk J, et al. **1985** **Intl Commn Assn**

Cognitive structure and involvement in a health information campaign.

cited in [821]

paper presented to the Health Communication Division of the International Communication Association Convention, Honolulu.

Leaflets and "small media"

- [507] Noelle-Neumann E** **1984** **Uni of Chicago Press**
The Spiral of Silence: Public Opinion, Our Social Skin
 Cites de Toquville on the French Revolution. The French church was in decline, and contempt for religion became a general and reigning passion.
 "Those who retained their belief in the doctrines of the church became afraid of being alone in their allegiance and, dreading isolation more than error, professed to share the opinion of only a part of the majority. So what was in reality the opinion of only a part ... of the nation came to be regarded as the will of all and for this reason seemed irresistible, even to those who had given it this false appearance."
 In an electoral context - those confident of victory spoke up, while losers tend towards silence.
 Varies a bit with individual self-confidence.
- [508] McCombs and Shaw** **POQ 36:177 1972**
The agenda-setting functions of the mass media.
 "the press may not be successful much of the time in telling people what to think, but it [may be] stunningly successful in telling its readers what to think about."
 Analysis of the 1968 Presidential campaign, so very politically-oriented.
- [509] Goertzel T G** **JPMS 11:209 1983**
The gender gap: Sex, family income and political opinions in the early 1980's.
- [510] Jones Linda M** **1993**
Promoting mouthguards: The development, implementation, and evaluation of a health education programme.
 Study Hall closed access
 Psych MA thesis VUW 1993
 Worked with dental therapists and sports coaches to promote the use of mouthguards by secondary school sports teams.
 Used seminars.
 Seminars alone much less effective than seminars plus availability of free mouthguards.
- [511] Downs A** **PI 28:38 1972**
Up and down with ecology: the issue-attention cycle.
 "The new media: Communication, research, and technology
 Interactive media
- [512] Rice R E** **1984**
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- [513] New Zealand Inst of Public Administration** **1992** **NZ Inst Public Admin**
 "Appearance and reality - communicating the public sector
 Paper for NZIPA seminar 10/92
- [514] Warner K E** **AJPH 77:140 1987**
Television and health education: Stay tuned.
 cited in [8]
 Necessary components of successful mass media public health campaign:
 Novelty & diversity of spot announcements
 Widespread dissemination
 High saturation
 Endurance
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 Newspapers or television - which do you believe?

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From a public health perspective: Shaping attitudes towards alcohol in NZ.
 VUW HV5128 N5 C345 F9 Big books
 University of Auckland Alcohol Research Unit 1986
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 PhD thesis 1979
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Mass media: Systems and effects
- [520] **Davison W P & Yu F T C (Eds)** 1974 **Praeger NY**
Mass communication research: Major issues and future directions.
- [521] **Fink R, Shapira S, & Koester R** **AJPH 62:328 1972**
Impact of efforts to increase participation in repetitive screening for early breast cancer detection.
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Mass media and smoking cessation: A critical review.
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Deciding What's News.
- [524] **Gaziano C** **CR 10:447 1983**
The knowledge gap: An analytical review of media effects.
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The organising role of motivation in health beliefs and intentions.
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 cited in "The advertising value of making possible a public television program." *Journal of Advertising Research*
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- [532] **Katz E & Szekso T** 1981 **Sage, Newbury Park CA**
Mass Media and Social Change
 in which: Noelle-Neumann E *Mass media and social change in developed societies.*

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| ABBREV. | TITLE | VUW CALLMARK |
|---------|--|------------------|
| ADA | Advertising Age | p HF5801 H244 |
| AWSE | Adweek (Southeast Ed) | - |
| AJPH | American Journal of Public Health | - |
| AJPS | American Journal of Political Science | p JA28 M629(+L2) |
| AJS | American Journal of Sociology | - |
| APSR | American Political Science Review | - |
| AP | American Psychologist | p BFI A513 |
| BFJ | British Food Journal | - |
| BMJ | British Medical Journal | DA505 B862 P ?? |
| CDRW | CD-ROM World | - |
| CEM | Chemical Week | - |
| CPS | Comparative Political Studies | p JAI C735 |
| CR | Communication Research | p P87 C735 |
| EDP | Editor and Publisher | - |
| ES | Executive Speeches | - |
| HA | FHealth Affairs | - |
| HBR | Harvard Business Review | p HF5001 H339 |
| HHS | Hospital and Health Services Administrator | - |
| IUCN NH | Nature Herald, Commission Educn & CommnIUCN | - |
| JAR | Journal of Advertising Research | p HF5801 J86 |
| JCOM | Journal of Communication | p P87 J86 |
| JCH | Journal of Community Health | - |
| JEE | Journal of Environmental Education | - |
| JHCM | Journal of Health Care Marketing | - |
| JHSB | Journal of Health and Social Behaviour | p HN1 J86 |
| JM | Journal of Marketing | p HF5415 J85 |
| JMR | Journal of Marketing Research | - |
| JPMS | Journal of Political and Military Sociology | - |
| JPPM | Journal of Public Policy and Marketing | - |
| JPSP | Journal of Personality and Social Psychology | p BF698 J86 |
| JQ | Journalism Quarterly | p PN4700 J86 |
| MMM | Medical Marketing and Media | - |
| MN | WMarketing News | - |
| PHR | Public Health Reports | - |
| PI | Public Interest | p JAI P976 |
| PO | Public Opinion | p JAI P975 |
| POQ | Public Opinion Quarterly | p JAI P975 |
| PR | Psychological Review | p BF1 P974 R |
| SMB | Supermarket Business | - |
| SP | Social Policy | p HN51 S678 |
| SPQ | Social Psychology Quarterly | - |
| WQ | Wilson Quarterly | p AS36 W752 |